

# PVM-8041Q/8044Q

## SERVICE MANUAL

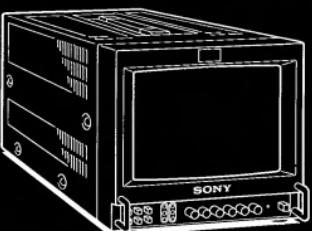
*US Model  
Canadian Model*

PVM-8041Q

Chassis No. SCC-E96A-A

PVM-8044Q

Chassis No. SCC-E96C-A



### SPECIFICATIONS

#### Video signal

Color system	PAL, SECAM, NTSC <sub>3.58</sub> , NTSC4.43
Resolution	PVM-8044Q : 450 TV lines PVM-8041Q : 250 TV lines
Aperture correction	-4.0 dB - +6.0 dB (at 3.0 MHz)
Frequency response	6.0 MHz (-3.0 dB) at all inputs
Synchronization	AFC time constant 1.0 msec.

#### Picture performance

Normal scan	6% over scan of CRT effective screen area
Underscan	3% underscan of CRT effective screen area
H. linearity	Less than 7.0% (typical)
V. linearity	Less than 7.0% (typical)
Convergence	Central area: 0.43mm (typical) Peripheral area: 0.53mm (typical)
Raster size stability	H: 1.0%, V: 1.5%
High voltage regulation	3.0%
Color temperature	D65

#### Inputs and Outputs

Inputs	Y/C IN: 4-pin mini DIN connector (See the pin assignment on page 2.) VIDEO IN: BNC connector 1Vp-p ± 6dB, sync negative AUDIO IN: phono jack, -5 dBs, less than 47k ohms
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R/R-Y, G/Y, B/B-Y: BNC connector  
R, G, B channels: 0.7 Vp-p, ±6 dB  
Sync on green : 0.3 Vp-p, negative,  
75 ohms terminated  
R-Y, B-Y channels: 0.7 Vp-p, ±6 dB  
Y channel: 0.7 Vp-p, ± 6 dB  
(Standard color bar signal of 75% chrominance)  
EXT SYNC IN: BNC connector  
Composite sync 4 Vp-p, ±6 dB,  
negative

#### Loop-through outputs

Y/C OUT: 4-pin mini DIN connector  
VIDEO OUT: BNC connector,  
75 ohms terminated  
AUDIO OUT: phono jack  
EXT SYNC OUT: BNC connector,  
75 ohms terminated  
AUDIO OUTPUT 0.5W

#### Tally/remote input

TALLY/REMOTE: 8-pin mini DIN connector (See the pin assignment on page 2.)

#### General

Power consumption 45 W Max at AC operation  
38 W at DC operation

— Continued on next page —

TRINITRON® COLOR VIDEO MONITOR  
**SONY**®

Power requirements	120V AC, 50/60 Hz 12V DC, with the Sony NP-1A/1B battery pack (not supplied) or AC-500 AC power adaptor (not supplied)
Operating temperature range	0 – 35 °C
Storage temperature range	-10 – +40 °C
Humidity	0 – 90%
Dimensions	Approx. 217 x 217 x 352.5 mm (w/h/d) (8 5/8 x 8 5/8 x 14 inches) not incl. projecting parts and controls
Weight	Approx. 7.8 kg (17 lb 3 oz) not incl. battery packs
Accessory supplied	AC power cord (1)

Design and specifications are subject to change without notice.

### Pin Assignment

Y/C IN connector (4-pin mini DIN)



Pin No.	Signal	Description
1	Y-input	1 Vp-p, sync negative, 75 ohms
2	CHROMA sub-carrier- Input	300 mVp-p, burst Delay time between Y and C: within 0:100 nsec., 75 ohms
3	GND for Y-input	GND
4	GND for CHROMA- input	GND

TALLY/REMOTE connector (8-pin mini DIN)



Pin No.	Signal
1	Blue only
2	H/V delay
3	GND
4	INT/EXT SYNC
5	Tally
6	Underscan/normal scan
7	A/B or RGB/component
8	RGB/LINE

For remote control, connect the pin of the desired function to pin 3 (GND).

## SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery-operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

### HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a coldwater pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line; the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

To Exposed Metal Parts on Set

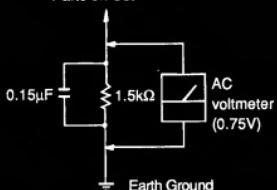


Fig. A. Using an AC voltmeter to check AC leakage.

Trouble Light

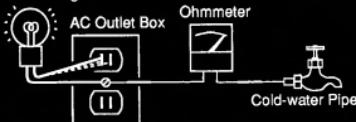


Fig. B. Checking for earth ground.

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## (CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS,CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

## WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

## SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  $\Delta$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

## (ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

## ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHASSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DÉPANNAGE. LE CHASSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDE À L'ALIMENTATION SECTEUR.

## ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE  $\Delta$  SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDICU DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

## SECTION 1

### GENERAL

#### 1-1. FEATURES

##### **Four color systems available**

The monitor can display PAL, SECAM, NTSC<sub>3.58</sub> and NTSC<sub>4.43</sub> signals. The appropriate color system is selected automatically.

- \* A signal of NTSC<sub>4.43</sub> is used for playing back NTSC recorded video cassettes with a video tape recorder/player especially designed for use with this system.

##### **Super Fine Pitch Trinitron picture tube**

(PVM-8044Q only)

The Super Fine Pitch Trinitron picture tube provides a high resolution picture. Horizontal resolution is more than 450 TV lines at the center of the picture.

##### **Blue only picture**

The picture can be displayed in blue and black only. This facilitates hue adjustment and the observation of video noise.

##### **Analog RGB/component Input connectors**

Analog RGB or component (Y, R-Y and B-Y) signals from video equipment can be input through these connectors.

##### **Y/C Input connector**

The video signal, split into the chrominance signal (C) and the luminance signal (Y), can be input through this connector, eliminating the interference between the two signals, which tends to occur in a composite video signal, assuring video quality.

##### **Beam current feedback circuit**

The built-in beam current feedback circuit assures stable white balance.

##### **Comb filter**

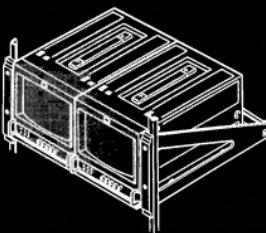
When NTSC video signals are received, a comb filter activates to increase the resolution, resulting in fine picture detail without color spill or color noise.

##### **Automatic termination**

The Y/C, VIDEO IN and EXT SYNC IN connectors are terminated at 75 ohms inside, when no cable is connected to the loop-through output connectors. When a cable is connected to an output connector, the 75-ohm termination is automatically released.

##### **EIA standard 19-Inch rack mounting**

By using an MB-507 mounting bracket (not supplied), the monitor can be mounted in an EIA standard 19-inch rack. For details on mounting, see the instruction manual of the MB-507.



#### **For the Customers in the USA**

##### **INFORMATION**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

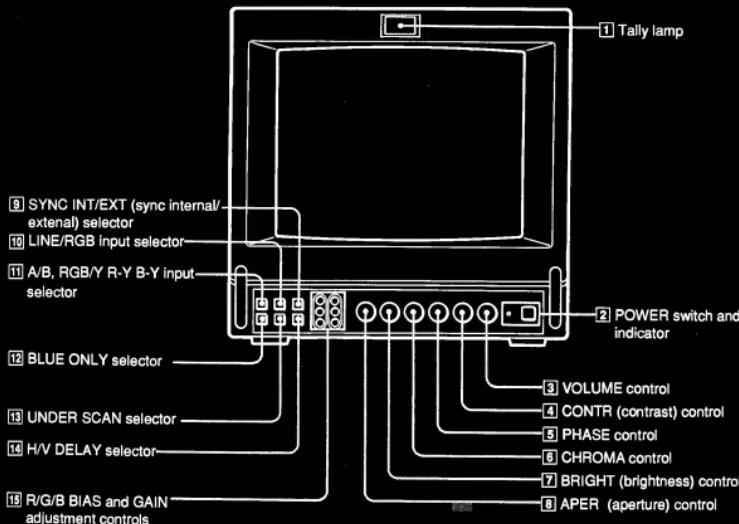
You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

#### **For the Customers in Canada**

This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

## 1-2. LOCATION AND FUNCTION OF PARTS AND CONTROLS

Front

**① Tally lamp****② POWER switch and Indicator**

Depress to turn the monitor on. The Indicator will light up in green.

The POWER indicator also functions as the battery indicator. When the internal battery becomes weak or the power supplied through the DC12V IN jack decreases, the indicator flashes.

**③ VOLUME control**

Turn this control clockwise or counterclockwise to obtain the desired volume.

**④ CONTR (contrast) control**

Turn clockwise to make the contrast stronger and counterclockwise to make it weaker.

**⑤ PHASE control**

This control is effective only for the NTSC<sub>3.58</sub> and NTSC<sub>4.43</sub> color systems. Turn clockwise to make the skin tones greenish and counterclockwise to make them purplish.

**Notes**

• The PHASE, CHROMA and APER control settings have no effect on an analog RGB signal.

• The PHASE control has no effect on component signals.

• The PHASE control setting is effective only for the NTSC system.

**⑥ CHROMA control**

Turn clockwise to make the color intensity stronger and counterclockwise to make it weaker.

**⑦ BRIGHT (brightness) control**

Turn clockwise for more brightness and counterclockwise for less.

**⑧ APER (aperture) control**

Turn clockwise for more sharpness and counterclockwise for less.

**⑨ SYNC INT/EXT (sync internal/external) selector**

Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.

Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

**10 LINE/RGB input selector**

Select the program to be monitored. Keep this button released (LINE) for a signal fed through the LINE A or LINE B connectors. Depress this button (RGB) for a signal fed through the RGB connectors.

**11 A/B, RGB/Y R-Y B-Y input selector**

When the LINE/RGB Input selector is set to LINE, keep this button released (A) for a signal fed through the LINE A connectors. Depress this button (B) for a signal fed through the LINE B connectors.

When the LINE/RGB Input selector is set to RGB, select the RGB signal or the component signal which is fed through the RGB input connectors. Keep this button released (RGB) for the RGB signal. Depress this button (Y R-Y B-Y) for the component signal.

**12 BLUE ONLY selector**

Depress this button to turn off the red and green signals. A blue signal is displayed as an apparent monochrome picture on the screen. This facilitates "chroma" and "phase" control adjustments and the observation of video noise.

**13 UNDER SCAN selector**

Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the raster are visible.

**14 H/V DELAY selector**

Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen; the vertical sync signal is displayed near the center of the screen.

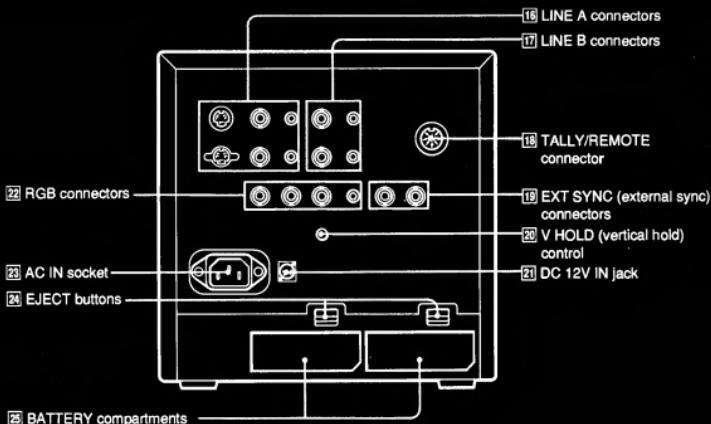
**15 R/G/B BIAS and GAIN adjustment controls**

Used for white balance fine adjustment. BIAS and GAIN controls are provided for the R (red), G (green) and B (blue) screens.

**BIAS:** Adjust the white balance and brightness of the screen at the lowlight.

**GAIN:** Adjust the white balance and brightness of the screen at the highlight.

## Rear

**[16] LINE A connectors**

To monitor the signal fed through these connectors, keep the LINE/RGB selector and the A/B, RGB/Y R-Y B-Y selector on the front panel released (LINE and A).

**Note**

The Y/C IN connector has a priority over the VIDEO IN connector.

When a plug is connected to the Y/C IN connector, the VIDEO IN connector is automatically disconnected.

**[17] LINE B connectors**

To monitor the signal fed through these connectors, keep the LINE/RGB selector released (LINE) and depress the A/B, RGB/Y R-Y B-Y selector (B) on the front panel.

**VIDEO IN (BNC)**: Connect to the video output of a video camera, VCR or other video equipment.

**VIDEO OUT (BNC)**: Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

**AUDIO IN (phono jack)**: Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

**AUDIO OUT (phono jack)**: Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

**[18] TALLY/REMOTE connector (8-pin mini DIN)**

Connect to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. This connector can be used for connecting a remote controller. For the pin assignment of this connector, see "Specifications" on page 2.

**[19] EXT SYNC (external sync) connectors**

**IN (BNC)**: When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector (EXT) on the front panel.

**OUT (BNC)**: Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

**[20] V HOLD (vertical hold) control**

Turn to stabilize the picture if it rolls vertically.

**[21] DC 12V IN jack (XLR, 4 pin)**

Connect the Sony AC-500 AC power adaptor (not supplied).

**[2] RGB/component input connectors**

R/R-Y, G/Y, B/B-Y (BNC), AUDIO (phono):

To monitor a signal fed through these connectors, depress the LINE/RGB selector on the front panel (RGB). When the SYNC INT/EXT selector on the front panel is released (INT), the monitor operates on the sync signal from the G/Y channel.

**To monitor the analog RGB signal**

Connect to the analog RGB signal outputs of a video camera having no sync signal. Keep the A/B, RGB/Y R-Y B-Y selector on the front panel released (RGB).

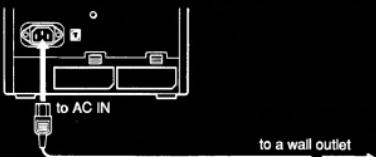
**To monitor the component signal**

Connect to the R-Y/Y/B-Y component signal outputs of a Sony BetaCam video camera. Depress the A/B, RGB/Y R-Y B-Y selector on the front panel (Y R-Y B-Y).

### 1-3. POWER SOURCES

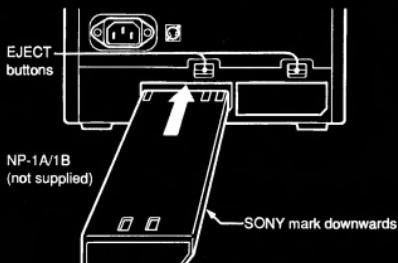
**House Current**

Connect the supplied AC power cord to the AC IN socket and to a wall outlet.



**Rechargeable Battery**

The monitor can operate with one or two battery packs. For extended use, two battery packs are recommended.



**[23] AC IN socket**

Connect the supplied AC power cord to this socket and to a wall outlet.

**[24] EJECT buttons**

Press the EJECT button upwards to remove the battery pack.

**[25] BATTERY compartments**

Insert the NP-1A/1B battery pack (not supplied).

When the AC power cord is plugged into the AC IN socket, the battery pack (if installed) or the AC power adaptor (if connected) is automatically disconnected.

**To remove the battery pack, press the EJECT button upwards.**

**For charging, use the BC-1WA battery charger (not supplied) for the NP-1A or the BC-1WB for the NP-1B.**

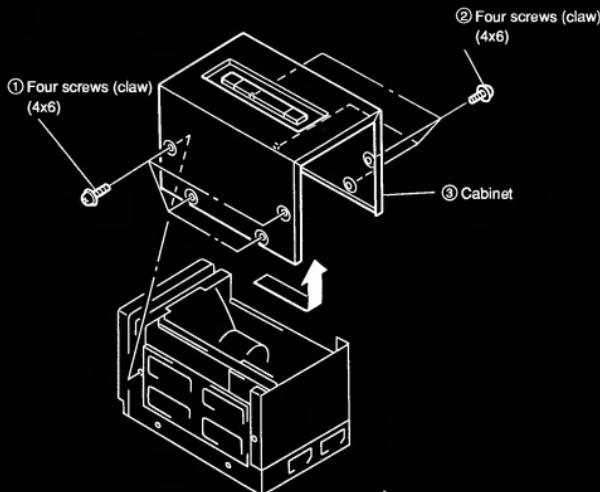
**Note**

Make sure that the AC power cord and the AC power adaptor are disconnected from the monitor. Otherwise, the monitor cannot operate on the battery pack(s).

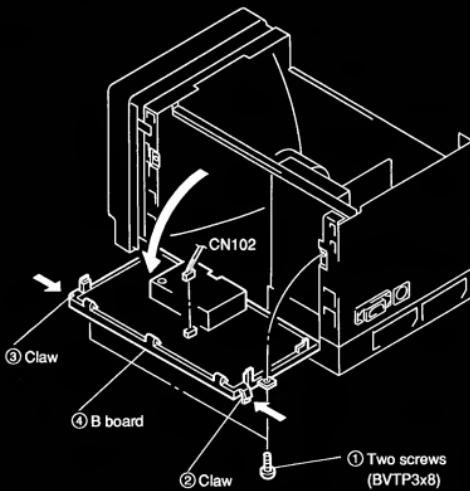
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## SECTION 2 DISASSEMBLY

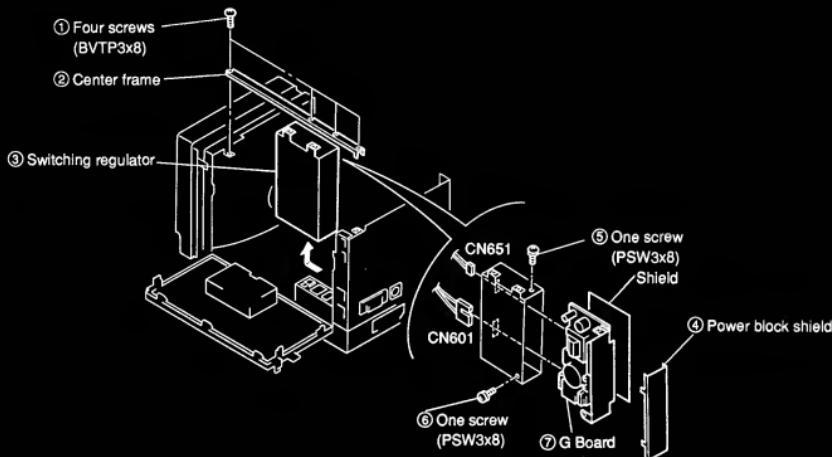
### 2-1. CABINET REMOVAL



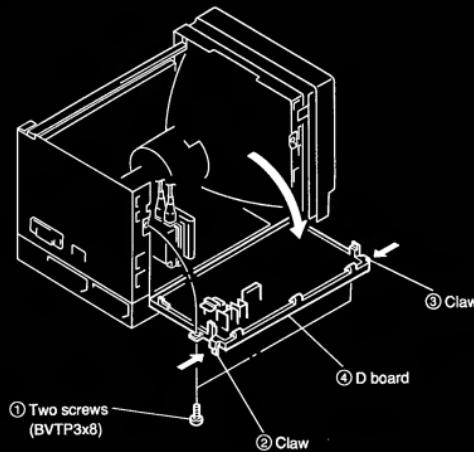
### 2-2. B BOARD REMOVAL



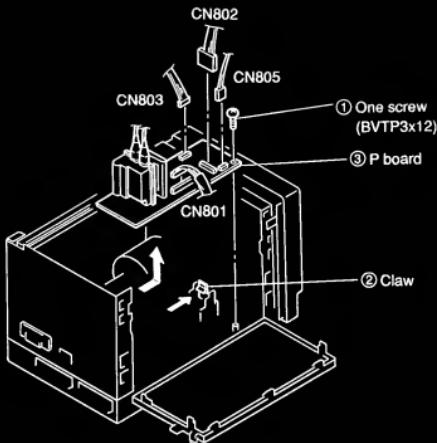
## 2-3. SWITCHING REGULATOR REMOVAL



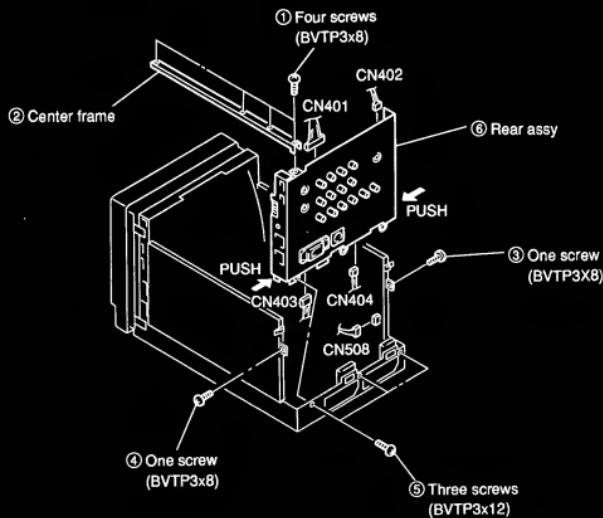
## 2-4. D BOARD REMOVAL

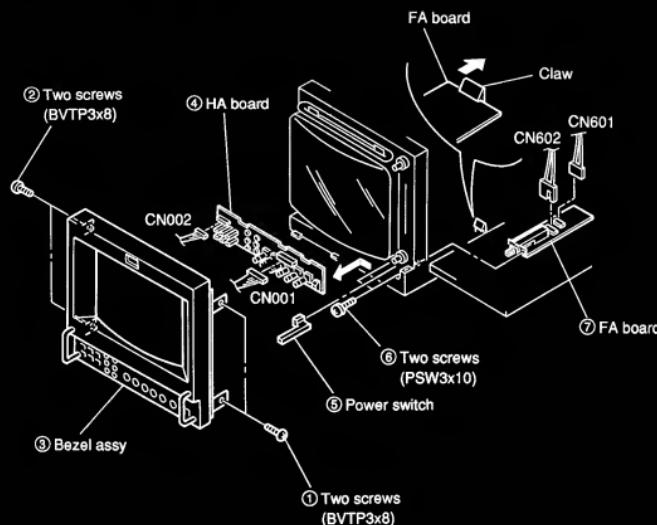


## 2-5. P BOARD REMOVAL

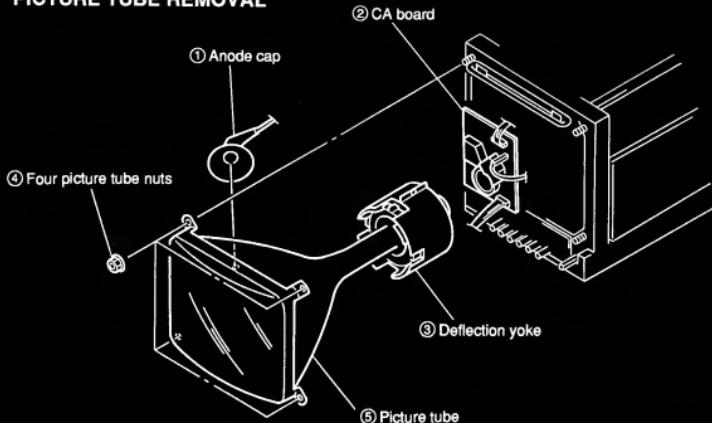


## 2-6. REAR ASSY REMOVAL



**2-7. HA AND FA BOARDS REMOVAL**

## 2-8. PICTURE TUBE REMOVAL



### Note : Caution for ANODE CAP installation.

When you replace PICTURE TUBE or FBT, remove RTV on ANODE CAP so that PICTURE TUBE and FBT can be separated. Please adhere picture tube and anode cap in accordance with the following procedure.

### ADHERING PROCEDURE OF ANODE CAP.

1. Clean PICTURE TUBE ANODE CAP with ethanol to remove original RTV.
2. Dry clean face with air.

3. Use KE-490RTV (RTV silicone adhesive, SHIN-ETSU CHEMICAL).

Part No.	Description
7-322-065-19	Silicone (RTV) KE-490W

4. Install ANODE CAP.
5. Adequately apply RTV to the entire picture tube anode area, place the anode cap onto the picture tube and push it down securely so that no air pockets remain beneath the cap.
6. Dry more than 12 hours at room temperature.

### • REMOVAL OF ANODE-CAP • REMOVING PROCEDURES



- ① Turn up one side of the rubber cap in the direction indicated by the arrow ④.



- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⑤.



- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⑥.

### • HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
- A metal fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!



## SECTION 3

### SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

The control and switch below should be set as follows unless otherwise noted:

CONTRAST control .....	80%
BRIGHTNESS control .....	50%

Perform the adjustments in order as follows:

- 3-1. Beam Landing
- 3-2. Convergence
- 3-3. Focus
- 3-4. White Balance

**Note:** Test equipment Required.

1. Color Bar/Pattern Generator
2. Degausser
3. Color Analyzer (Minolta)
4. Luminance Level Meter

#### 3-1. BEAM LANDING

##### Precaution

1. Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
2. Turn the power switch for the unit ON and erase the magnetic force using a degausser.

##### (1) Beam Landing

1. Receive an entirely white signal with the pattern generator.  
CONTRAST ..... MAX.  
BRIGHTNESS ..... set easy to observe
2. Adjust the white balance, G2 voltage and convergence roughly.
3. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.3-1.
4. Switch over the pattern generator to green.
5. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and blue and red are at the sides, evenly. (Fig.3-2)
6. Move the deflection yoke forward, and adjust so that the entire screen becomes green. Repeat 5 to 7 as to red and blue.
7. When landing at the corners is not right, correct by using the magnet. (Fig.3-3)
8. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.

**CAUTION: When correction magnet is used, be sure to degauss the unit.**

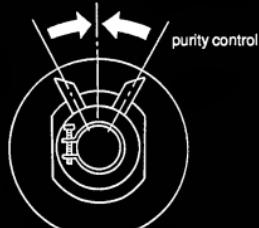
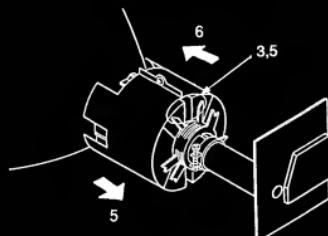


Fig.3-1



Fig.3-2

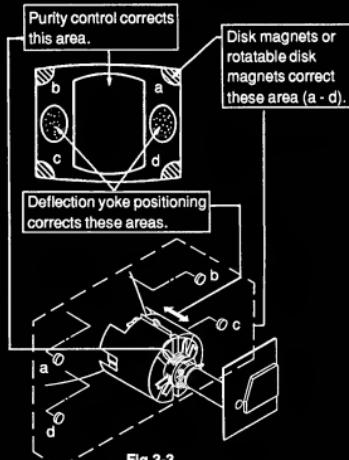


Fig.3-3

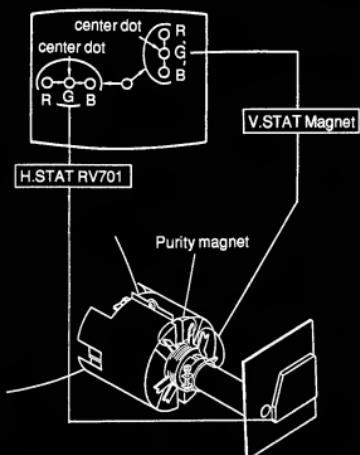
### 3-2. CONVERGENCE

#### (1) Horizontal and vertical Static Convergence Adjustment on the Center of Screen.

- Before starting, perform V. SIZE, V. CENT, H.SIZE, H.CENT and Screen Distortion Adjustment rightly.

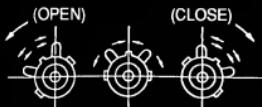
##### (Static Convergence Adjustment)

- Receive a dot signal, setting BRIGHTNESS minimum and set CONTRAST to normal.
- Adjust H.STAT VR to coincide red, green and blue dots on the center of screen. (Horizontal movement)
- Adjust V.STAT magnet to coincide red, green and blue dots on the center of screen. (Vertical movement)



- If the red, green and blue dots do not coincide on the center of screen with H.STAT VR, perform adjustment using V.STAT at the same time while tracking.

(Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.)



- When the V.STAT magnet is moved in the direction of arrow A and b, red, green and blue dots move as shown below.

##### ① When moving the V.STAT Magnet open or close.



##### ② When moving the V.STAT magnet counterclockwise.



##### ③ When moving the V.STAT magnet clockwise.



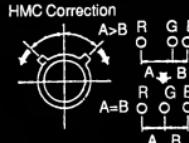
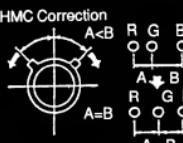
##### ④ When tilt the V.STAT magnet and open or close.



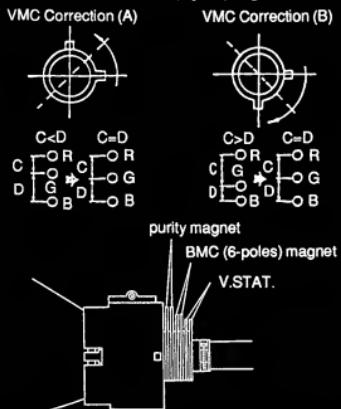
- If the red and green dots do not coincide with blue dot, adjustment with BMC (6-poles) magnet.

##### 5. HMC and VMC correction for BMC (6-Poles) magnet.

- ① HMC (Horizontal Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.

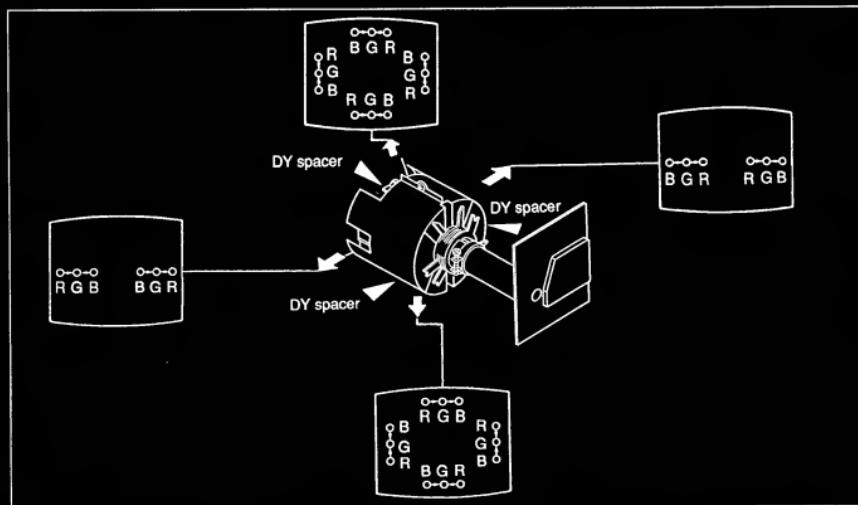


- ② VMC (Vertical Misconvergence) correction and motion of the Electron Beam with the BMC (6-poles) magnet.

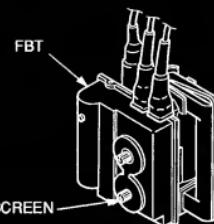


**(2) Horizontal and Vertical Dynamic Convergence Adjustment at the Environs of the Screen (Dynamic Convergence Adjustment)**

- When there is misconvergence at the sides of screen, adjust for best convergence as follows by moving the deflection yoke.
- Loosen deflection yoke screw. Remove deflection yoke spacers. Move the deflection yoke for best convergence. Tighten the deflection yoke screw. Install three deflection yoke spacers.



## Screen-corner Convergence

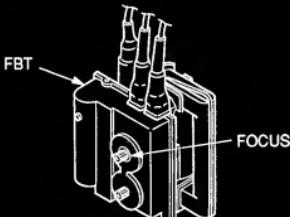


⑤ Affix a permalloy ass'y corresponding to the misconverged areas.  
(The rear side of picture tube)



## 3-3. FOCUS

1. Receive the broadcast.
2. CONTRAST → Normal
3. Adjust FOCUS control so that the focus on the center of screen becomes to the best.



## 3-4. WHITE BALANCE

## [Screen (G2) Voltage Adjustment]

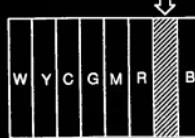
1. Receive a dot signal with the pattern generator.
2. Adjust R. G. B cut-off controls so that respective cathode voltage against ground becomes 103V DC.
3. Observing the screen, adjust SCREEN control so that the background of the dot signal is bright dimly.

## [White Balance]

1. Receive a color-bar pattern signal with the pattern generator.  
(Make black and white screen by chroma switch off.)
2.
  - BRIGHTNESS ..... 50%
  - CONTRAST ..... Minimum
  - CHROMA ..... 50%
  - DRIVE control ..... Mechanical center
  - BKG control ..... Mechanical center
3. Adjust RV118 (SUB BRT) on B board so that the blue stripe portion on the color-bar pattern signal is bright dimly.

color-bar pattern

BLU



4. Receive an entirely white signal from the pattern generator.
5. CONTRAST ..... 70% (90 degree clockwise from mechanical center.)
6. Using the luminance level meter, adjust the luminance level of the pattern generator becomes 3 Nits. (The condition the screen is bright dimly.)
7. Adjust white balance at cut-off using RV119 (G-C/O) and RV121 (B-C/O).
8. Change the all-white signal luminance level to 100 IREs.
9. Adjust white balance at high-light using RV120 (G-GAIN) and RV121 (B-GAIN).
10. Change the unit to blue ONLY mode.
11. Adjust white balance (at high-light) in blue ONLY mode using RV124 \*R-GAIN(BL) and RV125 (G-GAIN(BL)).
12. Using the luminance level meter, adjust the luminance level of the pattern generator becomes 8 Nits. Confirm that white balance at cut-off is satisfactory..

## SECTION 4

### SAFETY RELATED ADJUSTMENT

#### 4-1. SAFETY RELATED ADJUSTMENTS

##### **B+ MAX CONFIRMATION ( RV651)**

The following adjustments should always be performed when replacing the following components (marked with  on the schematic diagram).

on G board : (Power supply block)

I<sub>C</sub>601, I<sub>C</sub>651, PH602, C<sub>6</sub>55, R<sub>6</sub>53, R<sub>6</sub>55, R<sub>6</sub>56, R<sub>6</sub>57, RV<sub>6</sub>51.

1. For US model, supply  $130V \pm 5\%$  AC with variable auto-transformer.
2. Receive a dot signal.
3. • CONTRAST ..... Minimum  
• BRIGHTNESS ..... Minimum
4. Connect a digital multimeter to RY1601 pin-7 of D board.
5. Turn RV651 on the G board fully clockwise. Confirm that the voltage of RY1601 pin-7 is less than 41.9V DC.
6. If step 5 is not satisfied, readjust the RV651. After adjusting, fasten RV651 in place with epoxy.

##### **B+ MAX IN DC POWER INPUT MODE, CONFIRMATION ( RV1603)**

The following adjustments should always be performed when replacing the following components (marked with  on the schematic diagram).

on D board :

Q<sub>1</sub>601, Q<sub>1</sub>602, Q<sub>1</sub>603, D<sub>1</sub>601, D<sub>1</sub>602, D<sub>1</sub>603, D<sub>1</sub>604, D<sub>1</sub>605, C<sub>1</sub>601, C<sub>1</sub>602, R<sub>1</sub>601, R<sub>1</sub>602, R<sub>1</sub>603, R<sub>1</sub>604, R<sub>1</sub>605, R<sub>1</sub>606, R<sub>1</sub>607, R<sub>1</sub>608, R<sub>1</sub>629, R<sub>1</sub>628, R<sub>1</sub>630, RV<sub>1</sub>601, RV<sub>1</sub>603.

1. Supply DC  $12V \pm 0.4$  V from DC 12V IN connector.
2. Receive a dot signal.
3. • CONTRAST ..... Minimum  
• BRIGHTNESS ..... Minimum
4. Connect a digital multimeter to C1605 positive + side of D board.
5. Turn RV1601 on the D board fully clockwise. Confirm that the voltage of C1605 + pin is less than 41.9V DC.
6. If step 5 is not satisfied, readjust the RV1603. After adjusting, fasten RV1603 in place with epoxy.

##### **HOLD-DOWN CIRCUIT CONFIRMATION ( RV833) AND READJUSTMENTS**

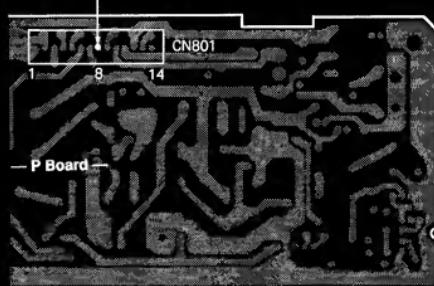
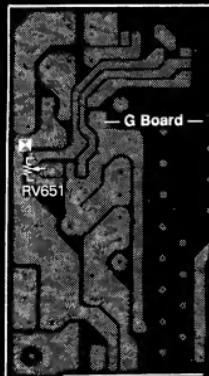
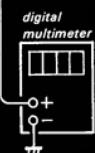
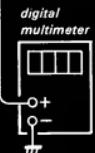
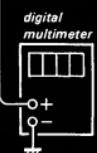
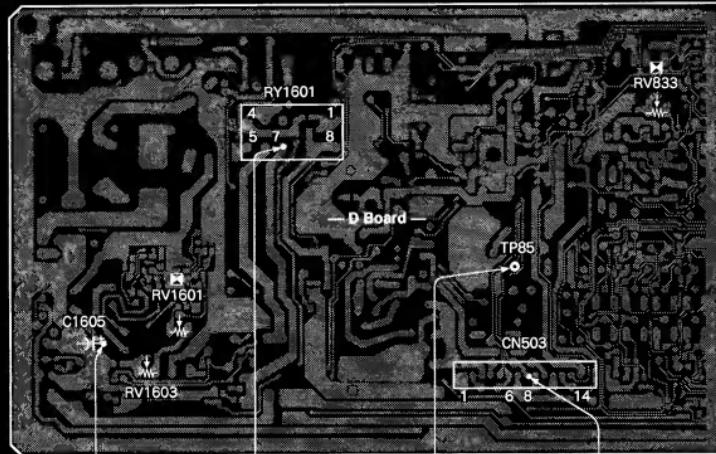
The following adjustments should always be performed when replacing the following components (marked with  on the schematic diagram).

on D board:

I<sub>C</sub>502, Q<sub>8</sub>33, Q<sub>8</sub>34, Q<sub>8</sub>35, Q<sub>8</sub>36, D<sub>8</sub>35, D<sub>8</sub>36, C<sub>5</sub>19, C<sub>8</sub>14, C<sub>8</sub>43, C<sub>8</sub>44, C<sub>8</sub>45, C<sub>8</sub>46, C<sub>8</sub>47, C<sub>8</sub>48, RV<sub>8</sub>33, R<sub>8</sub>23, R<sub>8</sub>50, R<sub>8</sub>51, R<sub>8</sub>52, R<sub>8</sub>53, R<sub>8</sub>54, R<sub>8</sub>55, R<sub>8</sub>56, R<sub>8</sub>57, R<sub>8</sub>58, R<sub>8</sub>59, R<sub>8</sub>61, R<sub>8</sub>62, R<sub>8</sub>63, NL<sub>8</sub>01.

on P board:NL801,T802(FBT)

1. Receive an entire white signal.
2. • CONTRAST ..... Maximum  
• BRIGHTNESS ..... Maximum
3. Connect a digital multimeter to the TP85 (CN503 pin-⑧).
4. Confirm the voltage is  $14.1 \pm 3.0$  V DC.
5. Receive a dot signal.
6. Connect an ammeter between D board CN503 pin-⑧ and P board CN801 pin-⑧.
7. Adjust BRIGHTNESS and CONTRAST so that the current is  $I_{ABL} = 160 \pm 30 \mu A$ .
8. Apply an external DC voltage gradually to TP85. When the voltage becomes  $18.5V \pm 0.1$  V DC, confirm the HOLD-DOWN circuit operates immediately and raster disappears.
9. When external DC voltage at TP85 becomes  $17.5V \pm 0.1$  V DC, confirm the HOLD-DOWN circuit doesn't operate.
10. Receive an entire white signal.
11. Adjust with BRIGHTNESS and CONTRAST controls so that the current is  $I_{ABL} = 520 \pm 30 \mu A$ .
12. Apply DC voltage of  $17.8V \pm 0.1$  V to TP85. Confirm the HOLD-DOWN circuit operates immediately and raster disappears.
13. With the same set-ups as steps 10 and 11, supply  $16.8V \pm 0.1$  V DC to TP85. Confirm that the HOLD-DOWN circuit doesn't operate.
14. When above specifications are not satisfied, readjust RV833. After adjusting, fasten RV833 in place with epoxy.

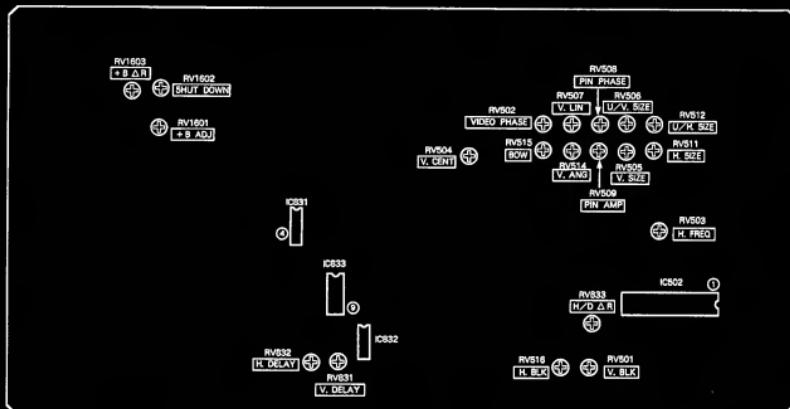


## SECTION 5

### CIRCUIT ADJUSTMENTS

#### 5-1. D BOARD ADJUSTMENTS

—D BOARD (COMPONENT SIDE)—



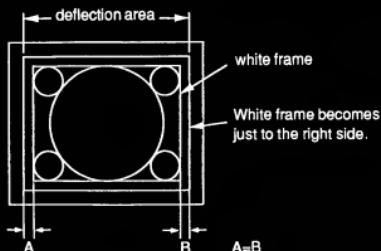
#### HORIZONTAL OSCILLATION FREQUENCY ADJUSTMENT (RV503)

1. Receive a monoscope signal.
2. Connect pin-① of IC502 to ground with  $100\mu\text{F}/16\text{V}$  electrolytic capacitor.
3. Adjust RV503 (H.FREQ) so that the screen streaming to stops.



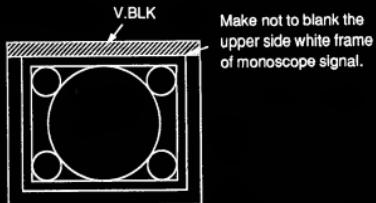
#### SCREEN PHASE ADJUSTMENTS (RV502, RV512, RV516)

1. Receive a monoscope signal.
2. Set U/S (Under Scan) switch to Under mode.
3. • CONTRAST ..... Minimum  
• BRIGHTNESS ..... Maximum.
4. Adjust RV512 (U.H.SIZE) so that the white frame of monoscope signal becomes visible.
5. Adjust RV516 (H.BLK) for minimum BLKG width so that all the deflection area becomes visible.
6. Adjust RV502 (VIDEO PHASE) so that the monoscope's white frames should have equal width.



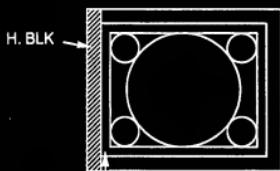
### H.V BLK ADJUSTMENTS (RV501, RV516)

1. Receive a monoscope signal.
2. Set U/S (Under Scan) switch to Under mode.
3. • CONTRAST ..... Minimum  
• BRIGHTNESS ..... Maximum.
4. V. BLK Adjustment (RV501)
- (1) Adjust RV501(V. BLK) so that the upper side white frame of monoscope signal is not blanked.



### 5. H. BLK Adjustment (RV516)

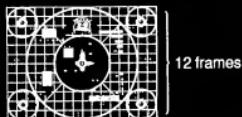
- (1) Adjust with RV516 (H. BLK) so that the left end white vertical line of the white frame of monoscope signal is not blanked as following figure.



Make not to blank the left end white vertical line of the white frame of monoscope signal.

### VERTICAL DEFLECTION PART ADJUSTMENTS (RV504, RV505, RV506, RV507)

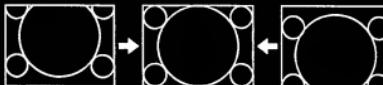
1. Receive a monoscope signal.
2. • CONTRAST ..... 70%  
• BRIGHTNESS ..... 50%
3. Adjust RV505 (V. SIZE) so that the vertical size of monoscope signal becomes 12 frames.



4. Adjust RV507 (V.LIN) the vertical linearity.



5. Adjust RV504 (V. CENT) the vertical position.

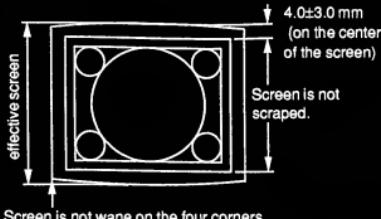


### 6. V. SIZE ADJUSTMENT (RV505)

- (1) Adjust RV505 (V. SIZE) so that the vertical size of monoscope signal becomes  $11.75 \pm 0.2$  frames.

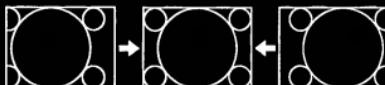
### 7. V.SIZE IN UNDERSCAN MODE ADJUSTMENT (RV506)

- (1) Set U/S (Under Scan) switch to Under mode.
- (2) Adjust the Under V.SIZE with RV506 (U/V. SIZE) as follows.



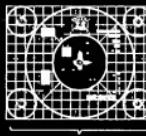
### HORIZONTAL DEFLECTION PART ADJUSTMENTS (RV508, RV509, RV511, RV514, RV515, RV801/P board)

1. Receive a monoscope signal.
2. • CONTRAST ..... 70%  
• BRIGHTNESS ..... 50%
3. H. CENT Adjustment (RV801 on P board)
- (1) Adjust RV801 on P board (H. CENT) the horizontal position.



### 4. H. SIZE Adjustment (RV511)

- (1) Adjust RV511 (H. SIZE) the horizontal size of 16 frames of monoscope signal.



5. PIN AMP, PIN PHASE, V. ANG, BOW ADJUSTMENTS  
(RV508 RV509, RV514, RV515)

Adjust RV514 (V. ANG) and RV515 (BOW) to correct vertical angular distortion and bow distortion. Adjust RV509 (PIN AMP) and RV508 (PIN PHASE) so that vertical lines become straight.

• V. ANG (RV514)



• BOW (RV515)



• PIN AMP (RV509)



• PIN PHASE (RV508)

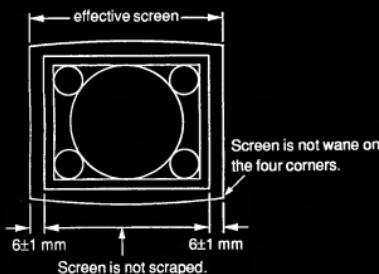


6. H. SIZE ADJUSTMENT (RV511)

- Adjust RV511 (H. SIZE) so that the horizontal size becomes 16 ± 0.2 frames.

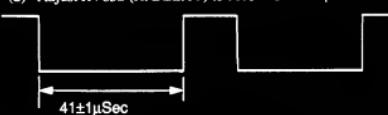
7. UNDERSCAN MODE H.SIZE ADJUSTMENT (RV512)

- Set U/S (Under Scan) switch to Under mode.
- Adjust RV512 (U/H. SIZE) the Under H. SIZE as shown in the figure.



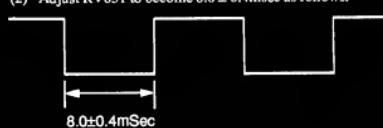
**H V DELAY ADJUSTMENT (RV831, RV832)**

- Receive a monoscope signal.
- CONTRAST ..... 70%
- BRIGHTNESS ..... 50%
- Set H V DELAY switch to DELAY mode.
- H. DELAY Adjustment (RV832)
  - Connect an oscilloscope to pin-④ of IC831.
  - Adjust RV832 (H. DELAY) to becomes  $41 \pm 1 \mu\text{sec}$ .



5. V. DELAY Adjustment (RV831)

- Connect an oscilloscope to pin-⑧ of IC833.
- Adjust RV831 to become  $8.0 \pm 0.4\text{msec}$  as follows.



**SHUT-DOWN VOLTAGE ADJUSTMENT (RV1602)**

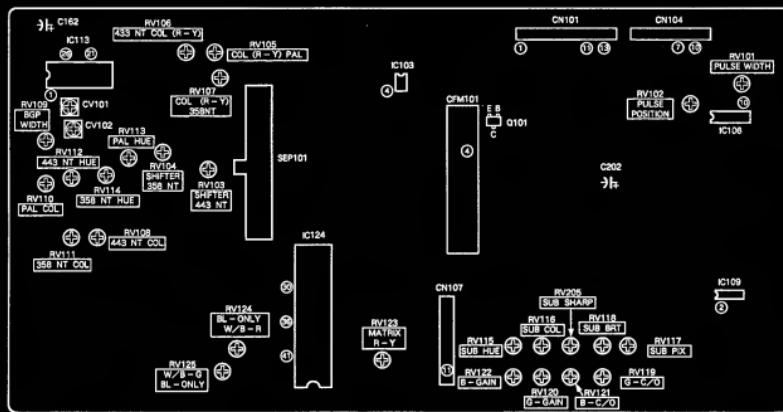
- Fully rotate RV1602 in the direction that does not shut-down.
- Supply a  $9.4V \pm 0.1V$  voltage to the C1602 side of L1602 on the D board.
- Turn AC power switch ON.
- Rotate D board RV1602 (SHT DOWN) slowly to the point that shuts-down the unit.

**B+ VOLTAGE DURING DC OPERATE MODE,  
ADJUSTMENT (RV1601)**

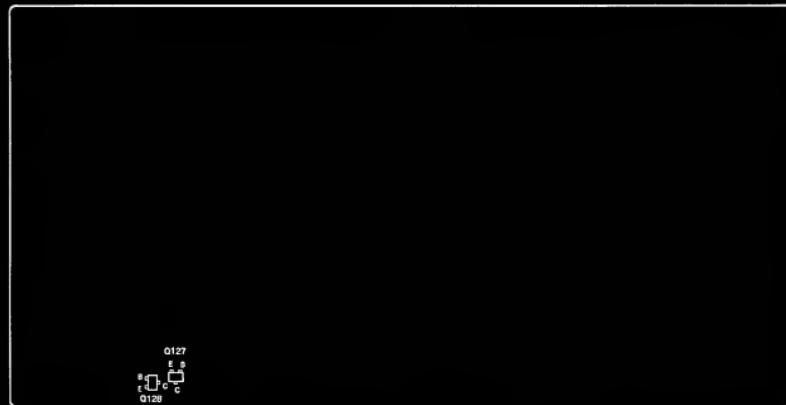
- Supply DC12V±0.2V to DC 12V IN connector.
- Receive a monoscope signal.
- CONTRAST ..... 80%
- BRIGHTNESS ..... 50%
- Connect a digital voltmeter to C1605 + positive side on D board.
- Adjust RV1601 on the D board for  $40.0 \pm 0.1V$  DC.

## **B BOARD ADJUSTMENT**

**-B BOARD (COMPONENT SIDE)-**



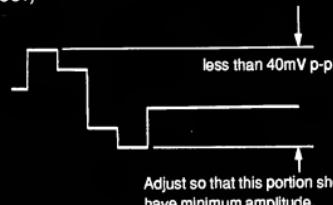
**-B BOARD (CONDUCTOR SIDE)-**



**PRIMARY COLOR MATRIX ADJUSTMENT  
(RV115, RV116, RV123)**

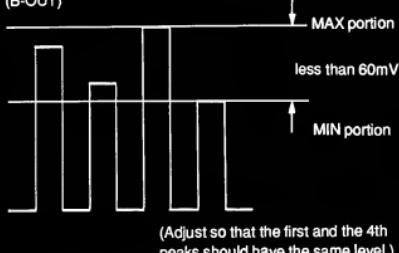
- Supply component color bar signal (75% chroma color bar) to the equipment so that Y signal is supplied to EXT SYNC and R-Y signal to R-Y connectors. Operate the equipment in external sync mode.
- Connect oscilloscope to IC124 pin-⑩ (B-OUT).
- Adjust RV115 (SUB HUE) to obtain the Blue output as shown in figure.

(B-OUT)



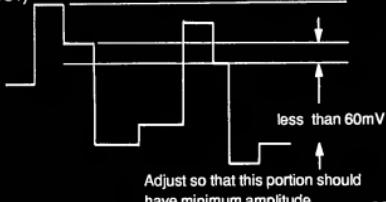
- Supply component color bar signal (75% color bar) to the component input connector to feed R-Y and B-Y signals. Operate the equipment in internal SYNC mode.
- Connect oscilloscope to IC124pin-⑩ (SUB-COL). Adjust RV116 (SUB-COL) so that waveform peaks should have the same level.

(B-OUT)



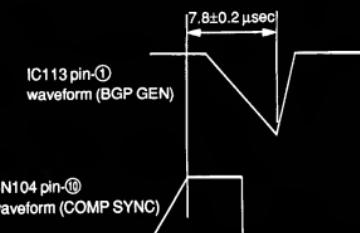
- Connect oscilloscope to IC124 pin-⑪ (R-OUT).
- Adjust RV123 (R-Y-IN) so that waveform peaks should have the same level.

(R-OUT)



**BURST GATE PULSE WIDTH ADJUSTMENT (RV109)**

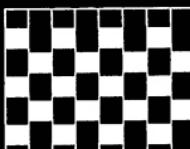
- Receive color bar signal.
- Connect dual trace oscilloscope to CN104 connector pin-⑩ (COMP-SYNC) and IC113 (M51279) pin-① (BGP-WIDTH). Adjust RV109 (BGP-WIDTH) to obtain the relationship as shown in the figure.



**VFO ADJUSTMENT (CV101,CV102)**

- 3.58MHz VFO adjustment (CV101)
  - Receive NTSC color bar signal.
  - Connect +5V power line to IC113 pin-⑧ (ID-FILT-REF) via a 4700Ω resistor.
  - Ground IC109 pin-② by connecting it to ground.
  - Ground C162 – negative side by connecting it to ground.
  - Connect frequency counter to IC113 pin-④. Adjust CV101 (358FO) for  $3579545 \pm 20\text{Hz}$ . (This adjustment can be alternatively done by observing screen as below.)

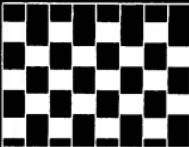
Adjust color synchronization by CV101 (358FO).



Adjust so that color stripes disappear and the hue change is stabilized extremely.

2. 4.43MHz VXO adjustment (CV102)
  - (1) Receive PAL colour bar signal.
  - (2) Connect +12V power line to IC109 pin ②.
  - (3) Connect frequency counter to IC113 pin ②. Adjust CV102 (443FO) for 4433619±20Hz.  
(This adjustment can be alternatively done by observing screen as below.)

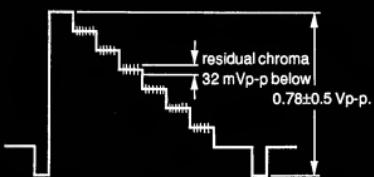
Adjust colour synchronization by CV102(443FO).



Adjust so that colour stripes disappear and the hue change is stabilized extremely.

#### NTSC COMB FILTER ADJUSTMENT (RV1, T1/CFM101 BOARD)

1. Receive NTSC 3.58 color bar signal.
2. Connect an oscilloscope to C202 – negative side.
3. Confirm the Y OUT is  $0.78 \pm 0.5$  Vp-p.
4. Confirm the residual chroma is 32 mVp-p below. If it is above 35 mVp-p, adjust with RV1 and T1 on CFM201 board while tracking.

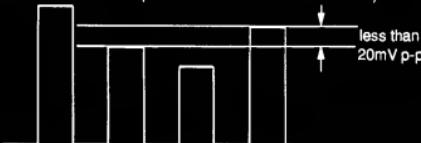


#### NTSC COLOR DEMODULATION ADJUSTMENT (RV114, RV111, RV104, RV107)

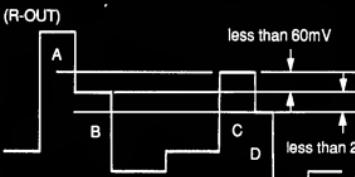
1. NTSC 3.58MHz - HUE adjustment (RV114)
  - (1) Supply NTSC colorbar signal including burst and R-Y component.  
(For example, Tektronix 1410SG output color bar signal with B-Y component removed.)
  - (2) Connect an oscilloscope to Q128 emitter (B-Y OUT).
  - (3) Adjust RV114 (358NT - HUE) so that all the waveform peaks should have equal amplitude (look flat) except burst. (Level difference should be less than 10mV p-p.)

2. NTSC 3.58MHz - COLOR adjustment (RV111)
  - (1) Receive NTSC 3.58 color bar signal.
  - (2) Connect an oscilloscope to IC124 pin ⑩ (B-OUT).
  - (3) Adjust RV111(358NT-COL) so that waveform peaks should have the same level (most flat).

(Adjust so that the first and the 4th peaks should have the same level.)



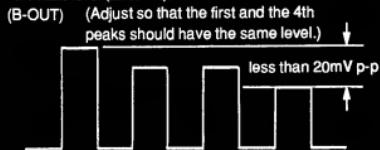
3. NTSC 3.58MHz - COLOR (R-Y) adjustment (RV104, RV107)
  - (1) Receive the color bar signal.
  - (2) Connect an oscilloscope to the Q127 emitter (R-Y OUT), and adjust RV104 (358NT-SHIFT) so that the output of the burst section (B-Y axis signal output) becomes 0.
  - (3) Connect an oscilloscope to IC124 pin ⑪ (R-OUT). Adjust RV107 (358NT-COL (R-Y)) so that the level difference should be minimum.



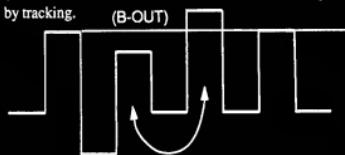
(Adjust for B=D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

**NTSC 4.43MHZ COLOR DEMODULATION  
ADJUSTMENT (RV108,RV112,RV103,RV106)**

1. NTSC 4.43MHz - COLOR adjustment (RV108,RV112)
  - (1) Receive NTSC 4.43 color bar signal (75% color bar).
  - (2) Connect an oscilloscope to IC124 pin-⑩ (B-OUT).
  - (3) Adjust RV108 (443NT-COL) so that waveform peaks should have the same level (most flat).

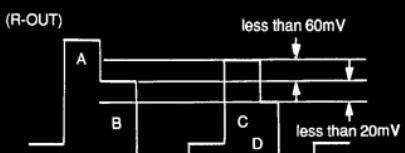


- (4) When cyan and magenta have level difference, adjust RV112 (443NT-HUE) and RV108 (443NT-COL) alternatively to remove, by tracking.



When cyan and magenta have level difference, adjust RV112 and RV108 alternatively to remove.

2. NTSC 4.43MHz - COLOR (R-Y) adjustment (RV103, RV106)
  - (1) Receive the NTSC 4.43 color bar signal (75%, chroma color bar).
  - (2) Connect an oscilloscope to the Q127 emitter (R-Y OUT), and adjust RV103(443NT-SHIFT) so that the output of the burst section (B-Y axis signal output) becomes 0.
  - (3) Connect an oscilloscope to IC124 pin-④ (R-OUT). Adjust RV106 (443NT-COL (R-Y)) so that the level difference should be minimum.

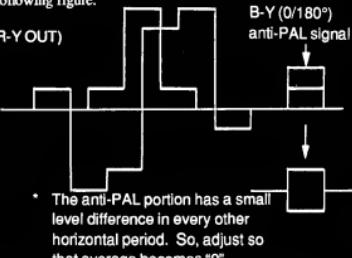


(Adjust for B-D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

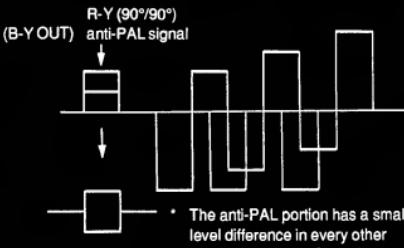
**PAL COLOR DEMODULATION ADJUSTMENT  
(RV113,RV2/SEP101, RV110,RV105,RV205)**

1. PAL PHASE Adjustment (RV113,RV2/SEP101)

- (1) Receive the special PAL color-bar.
- (2) Connect an oscilloscope to emitter of Q127 (R-Y OUT).
- (3) Adjust RV113 (PAL-PHASE) so that R-Y (0/180°) anti-PAL portion (in the R-Y demodulated output) becomes "0" (flat) as following figure.



- (4) Connect an oscilloscope to emitter of Q128 (B-Y OUT).
- (5) Adjust RV2 inside SEP101 so that R-Y (90°/90°) anti-PAL portion (in B-Y demodulated output) becomes "0" (flat) as following figure.



For the adjustments of (3) and (5), it is also possible to set the color level to MAX with the chroma adjusting knob of the unit and erase the color of the anti-pal signal section.

## 2. PAL COLOR ADJUSTMENT (RV110)

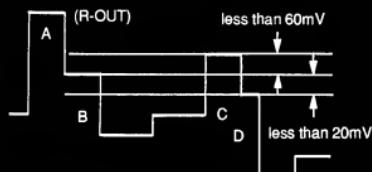
- (1) Receive PAL color bar signal (75% color bar).
- (2) Connect an oscilloscope to IC124 pin-⑩ (B-OUT).
- (3) Adjust RV110 (PAL-COL) so that waveform peaks should have the same level (most flat).

(Adjust so that the first and the 4th peaks should have the same level.)



## 3. PAL-COLOR-(R-Y) ADJUSTMENT (RV105)

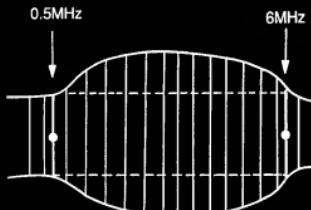
- (1) Connect an oscilloscope to IC124 pin-⑪ (R-OUT).
- (2) Adjust RV105 (PAL-COL-(R-Y)) so that waveform peaks should have the same level (most flat).



(Adjust for B=D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

## SUB-SHARP ADJUSTMENT (RV205)

- (1) Receive a sweep signal (or multi-burst).
- \* • Bandwidth should be more than 10MHz (flat).  
• Composite sync should be included.  
• Turn burst off.
- (2) Connect an oscilloscope to IC124 pin-⑩ (G-OUT).
- (3) Adjust RV205 (SUB-SHARP) as shown.



Example of sweep signal output waveform

[specification]

$6\text{MHz}/0.5\text{MHz} = 0 \pm 0.5\text{dB}$

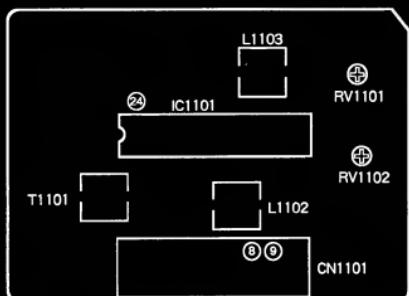
CHROMA H PULSE POSITION ADJUSTMENT  
(RV101, RV102)

- (1) Receive the SECAM color bar signal.  
(The left edge of the screen should not be colored.)
- (2) Set to the under-scan mode.
- (3) Adjust RV101 (PLUSE-WIDTH) until the point immediately before the color on the left edge of the screen disappears.
- (4) Release the under-scan mode.
- (5) Set the HV DELAY mode.
- (6) Adjust RV102 (PULSE-POSI) until the point immediately before the rising color of the image after back porch disappears.

**Note :** If image phase adjustment or HV DELAY amount adjustment during HV DELAY is performed after completing the adjustment in this section, re-adjustments will be required. Therefore, perform this adjustment after the two mentioned have been performed.

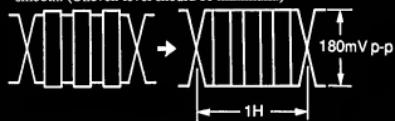
## S BOARD ADJUSTMENTS

### —S BOARD (COMPONENT SIDE)—



#### SECAM (T1101,L1102,L1103)

1. Receive SECAM color-bar.
2. Bell Filter Adjustment (T1101)
  - (1) Connect an oscilloscope to IC1101 pin-②.
  - (2) Adjust T1101 (Bell Filter) so that the chroma waveform becomes smooth. (Uneven level should be minimum.)
3. Color Balance Adjustment (L1102,L1103)
  - (1) Connect an oscilloscope to pin-⑨ (R-Y) of CN1101 connector.
  - (2) Adjust L1102 (R-Y) so that the non-colored portion level becomes flat.



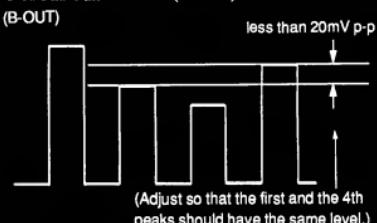
- (3) Connect an oscilloscope to pin-⑧ (B-Y) of CN1101 connector.
- (4) Adjust L1103 (B-Y) so that the non-colored portion level becomes flat.



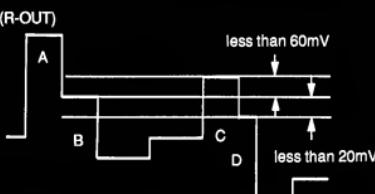
- (5) When adjusting the color level of the unit to MAX or MIN using the chroma adjusting knob, check that the white balance of the colorless section does not change.

#### DEMODULATION LEVEL ADJUSTMENT (RV1101,RV1102)

1. Receive SECAM color-bar.
2. Connect an oscilloscope to IC124 pin-⑩ (B-OUT).
3. Adjust S board RV1101 (SEC-COL) so that waveform peaks should have the same level (most flat).



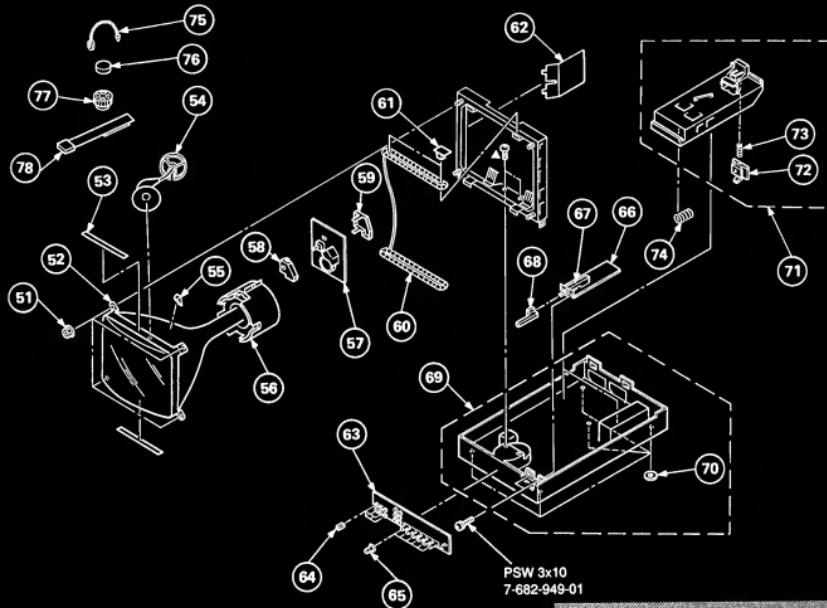
4. Connect an oscilloscope to IC124 pin-④ (R-OUT).
5. Adjust S board RV1102 (SEC-COL R-Y) so that the level difference should be minimum.



(Adjust for B=D. [less than 20mV] Also level difference between B and C should be less than 60mV.)

## 7-2. PICTURE TUBE

▲ : BVTP3x12 7-685-648-79



The components identified by shading and mark ▲  
are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une trame et une  
marque ▲ sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le  
numéro spécifié.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	4-304-511-01	FLANGE NUT, 5MM		66	*1-641-723-11	FA BOARD	
52	▲ 8-737-651-05	CRT (A20JMP10Y) (PVM-8041Q ONLY)		67	1-692-049-11	SWITCH, PUSH (AC POWER) (1KEY)	
	8-737-651-05	CRT (A20JMP10X) (PVM-8044Q ONLY)		68	4-034-841-01	SWITCH, POWER	
53	4-035-332-01	CLOTH PROTECTION		69	*X-4030-166-1	CHASSIS ASSY, BOTTOM	
54	*4-034-856-01	HOLDER, HV CABLE		70	4-034-840-01	RUBBER, FOOT	70
55	4-309-369-03	SPACER, DEFLECTION YOKE		71	*X-4030-163-1	GUIDE ASSY, BATTERY	72, 73
56	▲ 1-451-319-22	DEFLECTION YOKE (19PKC)		72	4-034-861-01	KNOB, BATTERY	
	1-451-720-11	CA BOARD		73	4-876-347-01	SPRING, COMPRESSION	
58	*4-376-133-11	COVER (MAIN), CV VOL		74	3-669-594-01	SPRING, COMPRESSION	
59	*4-376-132-11	COVER (REAR LID), CV VOL		75	4-308-870-00	CLIP, LEAD WIRE	
60	1-426-043-00	COIL, DEGAUSSING		76	1-452-126-11	MAGNET	
61	4-380-534-01	CAP, DGC		77	1-452-094-00	MAGNET, ROTATABLE DISK: 15MM Ø	
62	*4-034-850-02	INSULATOR		78	X-4308-815-8	PERMALLOY ASSY, CONVERGENCE	
63	*A-1371-782-A	HA BOARD, COMPLETE					
64	4-034-849-01	SWITCH (SMALL), PUSH					
65	X-4030-162-1	KNOB ASSY, CONTROL					

**B**

## SECTION 8

### ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark **A** are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## RESISTORS

- All resistors are in ohms
- F: nonflammable

When indicating parts by reference number, please include the board name.

## CAPACITORS

• MF:  $\mu$ F, PF:  $\mu$ F• MMH: mH, UH:  $\mu$ H

- The components identified by **B** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.

Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	A-1135-700-A	B BOARD, COMPLETE *****		C142	1-163-031-11	CERAMIC CHIP 0.01MF	50V
	3-710-578-01	COVER, VOLUME, 6 MOLD		C143	1-163-121-00	CERAMIC CHIP 150PF	50V
		<BAND PASS FILTER>		C144	1-163-101-00	CERAMIC CHIP 22PF	50V
BPFI01	1-236-363-11	FILTER, BAND PASS		C145	1-163-131-00	CERAMIC CHIP 390PF	50V
BPFI02	1-236-364-11	FILTER, BAND PASS		C146	1-126-157-11	ELECT 10MF	20% 16V
		<CAPACITOR>		C147	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C101	1-124-589-11	ELECT 47MF	20% 16V	C148	1-126-160-11	ELECT 1MF	20% 50V
C102	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C149	1-163-022-00	CERAMIC CHIP 0.012MF	10% 50V
C103	1-126-320-11	ELECT 10MF	20% 16V	C150	1-124-589-11	ELECT 47MF	20% 16V
C104	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C151	1-163-131-00	CERAMIC CHIP 0.390PF	5% 50V
C105	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C152	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C106	1-124-477-11	ELECT 47MF	20% 16V	C153	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C107	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C154	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C108	1-124-477-11	ELECT 47MF	20% 16V	C155	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C109	1-124-477-11	ELECT 47MF	20% 16V	C156	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C110	1-124-20-11	ELECT 220MF	20% 16V	C157	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C111	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C158	1-124-477-11	ELECT 47MF	20% 16V
C112	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C159	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C113	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C160	1-163-229-11	CERAMIC CHIP 12PF	5% 50V
C114	1-124-477-11	ELECT 47MF	20% 16V	C161	1-124-902-00	ELECT 0.47MF	20% 50V
C115	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C162	1-124-903-11	ELECT 1MF	20% 50V
C116	1-124-477-11	ELECT 47MF	20% 16V	C163	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C117	1-124-477-11	ELECT 47MF	20% 16V	C164	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C118	1-124-477-11	ELECT 47MF	20% 16V	C165	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C119	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C166	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C120	1-124-477-11	ELECT 47MF	20% 16V	C167	1-124-477-11	ELECT 47MF	20% 16V
C121	1-124-477-11	ELECT 47MF	20% 16V	C168	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C122	1-124-477-11	ELECT 47MF	20% 16V	C169	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C123	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C170	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C124	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C171	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C125	1-124-477-11	ELECT 47MF	20% 16V	C172	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C126	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C173	1-124-589-11	ELECT 47MF	20% 16V
C127	1-124-477-11	ELECT 47MF	20% 16V	C174	1-124-477-11	ELECT 47MF	20% 16V
C128	1-124-477-11	ELECT 47MF	20% 16V	C175	1-108-792-11	NYLAR 0.001MF	5% 50V
C129	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C176	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C130	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C177	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C131	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C178	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C132	1-124-589-11	ELECT 47MF	20% 16V	C179	1-126-160-11	ELECT 1MF	20% 50V
C133	1-124-589-11	ELECT 47MF	20% 16V	C180	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C134	1-163-275-11	CERAMIC CHIP 0.001MF	5% 50V	C181	1-126-154-11	ELECT 47MF	20% 6.3V
C135	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C182	1-126-163-11	ELECT 4.7MF	20% 16V
C136	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C183	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C137	1-163-115-00	CERAMIC CHIP 82PF	5% 50V	C184	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C138	1-124-589-11	ELECT 47MF	20% 16V	C185	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C139	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C186	1-163-099-00	CERAMIC CHIP 18PF	5% 50V
C140	1-163-688-91	CERAMIC CHIP 0.001MF	5% 50V	C187	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C141	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V	C188	1-163-031-11	CERAMIC CHIP 0.01MF	50V
				C189	1-163-035-00	CERAMIC CHIP 0.047MF	50V
				C190	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
				C191	1-163-031-11	CERAMIC CHIP 0.01MF	50V

B

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C192	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C258	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C193	1-124-589-11	ELECT 47MF	20% 16V	C259	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C194	1-124-589-11	ELECT 47MF	20% 16V	C260	1-124-465-00	ELECT 0.47MF	20% 50V
C195	1-124-589-11	ELECT 47MF	20% 16V	C261	1-137-193-11	FILM 0.39NF	5% 50V
C196	1-124-589-11	ELECT 47MF	20% 16V	C262	1-124-465-00	ELECT 0.47MF	20% 50V
C197	1-124-589-11	ELECT 47MF	20% 16V	C264	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C198	1-124-589-11	ELECT 47MF	20% 16V	C265	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C199	1-124-589-11	ELECT 47MF	20% 16V	C266	1-126-320-11	ELECT 10MF	20% 16V
C202	1-124-589-11	ELECT 47MF	20% 16V	C267	1-126-320-11	ELECT 10MF	20% 16V
C203	1-124-589-11	ELECT 47MF	20% 16V	C268	1-124-477-11	ELECT 47MF	20% 16V
C204	1-124-589-11	ELECT 47MF	20% 16V	C269	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C205	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C270	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C206	1-164-298-11	CERAMIC CHIP 0.15MF	10% 25V	C271	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C207	1-164-298-11	CERAMIC CHIP 0.15MF	10% 25V	C272	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C208	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	C273	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C209	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C274	1-124-477-11	ELECT 47MF	20% 16V
C210	1-124-589-11	ELECT 47MF	20% 16V	C275	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C211	1-124-589-11	ELECT 47MF	20% 16V	C276	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C212	1-124-589-11	ELECT 47MF	20% 16V	C277	1-163-097-00	CERAMIC CHIP 0.047MF	10% 25V
C213	1-124-589-11	ELECT 47MF	20% 16V	C278	1-163-809-11	CERAMIC CHIP 10MF	20% 16V
C214	1-126-157-11	ELECT 10MF	20% 16V	C279	1-126-157-11	ELECT 10MF	20% 16V
C215	1-126-157-11	ELECT 10MF	20% 16V	C280	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C216	1-126-157-11	ELECT 10MF	20% 16V	C281	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C217	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C282	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C218	1-164-298-11	CERAMIC CHIP 0.15MF	10% 25V	C283	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C219	1-163-089-11	CERAMIC CHIP 0.01MF	10% 50V	C284	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C220	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C285	1-163-126-00	CERAMIC CHIP 220PF	5% 50V
C221	1-124-589-11	ELECT 47MF	20% 50V	C301	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C222	1-163-093-00	CERAMIC CHIP 10PF	5% 50V	C302	1-124-589-11	ELECT 47MF	20% 16V
C223	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C303	1-126-157-11	ELECT 10MF	20% 16V
C225	1-124-477-11	ELECT 47MF	20% 16V	C304	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C226	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C305	1-124-257-00	ELECT 2.2MF	20% 50V
C227	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C306	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C228	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V	C307	1-163-145-00	CERAMIC CHIP 0.0015MF	5% 25V
C229	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C308	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C230	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C309	1-164-004-11	CERAMIC CHIP 0.01MF	10% 25V
C231	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V	C310	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C232	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C312	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C233	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C313	1-163-115-00	CERAMIC CHIP 82PF	5% 50V
C234	1-163-038-00	CERAMIC CHIP 0.1MF	25V	C314	1-126-157-11	ELECT 10MF	20% 16V
C235	1-163-986-00	CERAMIC CHIP 0.027MF	10% 25V	C315	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C236	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C316	1-126-157-11	ELECT 10MF	20% 16V
C237	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C317	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C238	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V	C318	1-163-095-00	CERAMIC CHIP 12PF	5% 50V
C239	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C319	1-163-095-00	CERAMIC CHIP 12PF	5% 50V
C240	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C320	1-163-095-00	CERAMIC CHIP 12PF	5% 50V
C241	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C321	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C242	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C322	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C243	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C324	1-163-121-00	CERAMIC CHIP 68PF	5% 50V
C244	1-163-103-00	CERAMIC CHIP 27PF	5% 50V	C344	1-163-092-00	CERAMIC CHIP 0.001MF	0.25PP 50V
C245	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C345	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C246	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C346	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C247	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C347	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C248	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C349	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C249	1-126-101-11	ELECT 100MF	20% 16V	C329	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C250	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C329	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C251	1-110-364-11	NYLAR 0.1MF	10% 200V	C329	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C252	1-123-935-00	ELECT 33MF	20% 160V	C329	1-163-119-00	CERAMIC CHIP 68PF	5% 50V
C253	1-124-477-11	ELECT 47MF	20% 16V	C329	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C254	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C329	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C255	1-124-477-11	ELECT 47MF	20% 16V	C329	1-163-106-11	ELECT 1MF	20% 50V
C256	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C301	1-126-160-11	ELECT 1MF	20% 50V
C257	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C302	1-126-160-11	ELECT 1MF	20% 50V

**B**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK	
C1303	1-126-160-11	ELECT	INF	20%	50V	D135	8-719-404-46	DIODE MA110
		<FILTER BLOCK>				D136	8-719-404-46	DIODE MA110
CFM101	1-464-880-11	FILTER BLOCK, COM (CFB-2)				D137	8-719-404-46	DIODE MA110
		<CONNECTOR>				D138	8-719-404-46	DIODE MA110
CN101	1-506-480-11	PIN, CONNECTOR 15P				D139	8-719-404-46	DIODE MA110
CN102	*1-564-506-11	PLUG, CONNECTOR 3P				D140	8-719-404-46	DIODE MA110
CN103	*1-565-503-11	CONNECTOR, BOARD TO BOARD 12P				D143	8-719-404-46	DIODE MA110
CN104	1-506-477-11	PIN, CONNECTOR 12P				D144	8-719-404-46	DIODE MA110
CN105	*1-564-509-11	PLUG, CONNECTOR 6P				D145	8-719-404-46	DIODE MA110
CN106	1-506-473-11	PIN, CONNECTOR 8P				D146	8-719-404-46	DIODE MA110
CN107	1-506-478-11	PIN, CONNECTOR 13P				D147	8-719-404-46	DIODE MA110
CN108	*1-564-506-11	PLUG, CONNECTOR 3P				D148	8-719-404-46	DIODE MA110
		<TRAP MODULE>				D149	8-719-404-46	DIODE MA110
CTR101	1-236-366-11	MODULE, TRAP				D150	8-719-404-46	DIODE MA110
CTR102	1-236-365-11	MODULE, TRAP				D151	8-719-404-46	DIODE MA110
		<TRIMMER>				D152	8-719-404-46	DIODE MA110
CV101	1-141-245-00	CAP, TRIMMER				D153	8-719-977-20	DIODE DTZ8-2B
CV102	1-141-245-00	CAP, TRIMMER				D154	8-719-404-46	DIODE MA110
		<DIODE>				D155	8-719-404-46	DIODE MA110
D101	8-719-404-46	DIODE MA110				D156	8-719-404-46	DIODE MA110
D102	8-719-404-46	DIODE MA110				D157	8-719-901-83	DIODE ISS83
D103	8-719-404-46	DIODE MA110				D158	8-719-901-83	DIODE ISS83
D104	8-719-404-46	DIODE MA110				D159	8-719-901-83	DIODE ISS83
D105	8-719-404-46	DIODE MA110				D160	8-719-404-46	DIODE MA110
D106	8-719-404-46	DIODE MA110				D161	8-719-404-46	DIODE MA110
D107	8-719-404-46	DIODE MA110				D162	8-719-404-46	DIODE MA110
D108	8-719-404-46	DIODE MA110				D170	8-719-404-46	DIODE MA110
D109	8-719-404-46	DIODE MA110				D171	8-719-404-46	DIODE MA110
D110	8-719-404-46	DIODE MA110				D172	8-719-404-46	DIODE MA110
D111	8-719-404-46	DIODE MA110				D285	8-719-404-46	DIODE MA110
D112	8-719-404-46	DIODE MA110				D289	8-719-404-46	DIODE MA110
D113	8-719-404-46	DIODE MA110				D341	8-719-404-46	DIODE MA110
D114	8-719-404-46	DIODE MA110				D342	8-719-104-34	DIODE IS2836
D115	8-719-404-46	DIODE MA110				D343	8-719-800-76	DIODE ISS226
D116	8-719-404-46	DIODE MA110				D344	8-719-105-99	DIODE RD.2M-2B
D117	8-719-404-46	DIODE MA110				D345	8-719-901-83	DIODE ISS83
D118	8-719-404-46	DIODE MA110				D346	8-719-901-83	DIODE ISS83
D119	8-719-404-46	DIODE MA110				D347	8-719-901-83	DIODE ISS83
D120	8-719-404-46	DIODE MA110				D348	8-719-800-76	DIODE ISS226
D121	8-719-404-46	DIODE MA110				D349	8-719-800-76	DIODE ISS226
D122	8-719-404-46	DIODE MA110				D350	8-719-800-76	DIODE ISS226
D123	8-719-404-46	DIODE MA110				D393	8-719-404-46	DIODE MA110
D125	8-719-404-46	DIODE MA110						<DELAY LINE>
D126	8-719-404-46	DIODE MA110				DL101	1-415-632-11	DELAY LINE, Y
D127	8-719-404-46	DIODE MA110				DL102	1-415-633-11	DELAY LINE, Y
D128	8-719-400-18	DIODE MA152WK						<IC>
D129	8-719-404-46	DIODE MA110				IC101	8-759-048-09	IC MM1148XF
D130	8-719-800-76	DIODE ISS226				IC102	8-759-501-21	IC MM1149XF
D131	8-719-800-76	DIODE ISS226				IC103	8-759-501-21	IC MM1149XF
D132	8-719-800-76	DIODE ISS226				IC104	8-759-501-21	IC MM1149XF
D133	8-719-404-46	DIODE MA110				IC105	8-759-048-09	IC MM1148XF
D134	8-719-404-46	DIODE MA110				IC106	8-759-009-51	IC MC14538BF
						IC107	8-759-509-57	IC XRU0584BF
						IC108	8-759-509-17	IC XRU0405BF
						IC109	8-759-509-37	IC XRU0407BF
						IC110	8-759-509-17	IC XRU0405BF
						IC111	8-759-509-17	IC XRU0405BF
						IC112	8-759-924-12	IC LM7805CT

**B**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C113	8-759-631-08	IC N51279FP		Q123	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C114	8-759-509-13	IC XRU04052BF		Q124	8-729-216-22	TRANSISTOR 2SA1162-G	
C115	8-759-509-13	IC XRU04052BF		Q125	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C116	8-759-509-05	IC XRU04066BF		Q126	8-729-901-01	TRANSISTOR DTC144EX	
C117	8-759-511-32	IC NJM245M		Q127	8-729-216-22	TRANSISTOR 2SA1162-G	
C118	8-759-711-32	IC NJM245M		Q128	8-729-216-22	TRANSISTOR 2SA1162-G	
C119	8-759-509-32	IC NJM245M		Q129	8-729-901-01	TRANSISTOR DTC144EX	
C120	8-759-509-05	IC XRU04066BF		Q130	8-729-216-22	TRANSISTOR 2SA1162-G	
C121	8-759-509-17	IC XRU04053BF		Q131	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C122	8-759-998-98	IC LN358D		Q132	8-729-216-22	TRANSISTOR 2SA1162-G	
C123	8-759-998-98	IC LN358D		Q133	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C124	8-752-052-62	IC CXA1478S		Q134	8-729-901-01	TRANSISTOR DTC144EX	
C125	8-759-509-05	IC XRU04066BF		Q135	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C126	8-759-509-17	IC XRU04053BF		Q136	8-729-907-26	TRANSISTOR IMX1	
C127	8-759-998-98	IC LN358D		Q137	8-729-907-26	TRANSISTOR IMX1	
C128	8-759-998-98	IC LN358D		Q138	8-729-907-26	TRANSISTOR IMX1	
C129	8-759-998-98	IC LN358D		Q139	8-729-216-22	TRANSISTOR 2SA1162-G	
<COIL>							
L101	I-410-470-11	INDUCTOR	10UH	Q143	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L102	I-410-090-11	INDUCTOR	18MMH	Q144	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L103	I-412-002-31	INDUCTOR CHIP	4.7UH	Q145	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L104	I-412-002-31	INDUCTOR CHIP	4.7UH	Q146	8-729-255-12	TRANSISTOR 2SC2551-0	
L105	I-412-002-31	INDUCTOR CHIP	4.7UH	Q147	8-729-255-12	TRANSISTOR 2SC2551-0	
L106	I-410-470-11	INDUCTOR	10UH	Q148	8-729-216-22	TRANSISTOR 2SA1162-G	
L107	I-410-470-11	INDUCTOR	10UH	Q149	8-729-200-17	TRANSISTOR 2SA1091-0	
L108	I-408-418-00	INDUCTOR	56UH	Q150	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L109	I-408-418-00	INDUCTOR	56UH	Q151	8-729-216-22	TRANSISTOR 2SA1162-G	
L110	I-408-418-00	INDUCTOR	56UH	Q152	8-729-200-17	TRANSISTOR 2SA1091-0	
L112	I-408-419-00	INDUCTOR	68UH	Q153	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L113	I-410-047-31	INDUCTOR CHIP	33UH	Q154	8-729-216-22	TRANSISTOR 2SA1162-G	
L114	I-410-047-31	INDUCTOR CHIP	33UH	Q155	8-729-200-17	TRANSISTOR 2SA1091-0	
L115	I-410-047-31	INDUCTOR CHIP	33UH	Q157	8-729-326-11	TRANSISTOR 2SC2611	
L116	I-412-011-31	INDUCTOR CHIP	27UH	Q158	8-729-326-11	TRANSISTOR 2SC2611	
L117	I-412-011-31	INDUCTOR CHIP	27UH	Q159	8-729-326-11	TRANSISTOR 2SC2611	
L118	I-412-011-31	INDUCTOR CHIP	27UH	Q160	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L250	I-410-997-31	INDUCTOR CHIP	2.2UH	Q161	8-729-216-22	TRANSISTOR 2SA1162-G	
L251	I-410-999-11	INDUCTOR CHIP	3.3UH	Q162	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L252	I-410-478-11	INDUCTOR	47UH	Q163	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L300	I-410-482-31	INDUCTOR	100UH	Q164	8-729-901-01	TRANSISTOR DTC144EX	
<TRANSISTOR>							
Q101	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q165	8-729-216-22	TRANSISTOR 2SA1162-G	
Q102	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q166	8-729-216-22	TRANSISTOR 2SA1162-G	
Q103	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q167	8-729-216-22	TRANSISTOR 2SA1162-G	
Q104	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q168	8-729-216-22	TRANSISTOR 2SA1162-G	
Q105	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q169	8-729-901-01	TRANSISTOR DTC144EX	
Q106	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q170	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q107	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q171	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q108	8-729-216-22	TRANSISTOR 2SA1162-G		Q172	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q109	8-729-901-01	TRANSISTOR DTC144EX		Q173	8-729-216-22	TRANSISTOR 2SA1162-G	
Q112	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q174	8-729-216-22	TRANSISTOR 2SA1162-G	
Q113	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q175	8-729-216-22	TRANSISTOR 2SA1162-G	
Q114	8-729-216-22	TRANSISTOR 2SA1162-G		Q176	8-729-216-22	TRANSISTOR 2SA1162-G	
Q115	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q177	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q116	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q178	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q117	8-729-216-22	TRANSISTOR 2SA1162-G		Q179	8-729-901-01	TRANSISTOR DTC144EX	
Q118	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q180	8-729-216-22	TRANSISTOR 2SA1162-G	
Q119	8-729-216-22	TRANSISTOR 2SA1162-G		Q181	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q120	8-729-16-22	TRANSISTOR 2SA1162-G		Q182	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q121	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q183	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q122	8-729-216-22	TRANSISTOR 2SA1162-G		Q184	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q185	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q185	8-729-216-22	TRANSISTOR 2SA1162-G	
Q186	8-729-216-22	TRANSISTOR 2SA1162-G		Q186	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q187	8-729-16-22	TRANSISTOR 2SA1162-G		Q187	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q188	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q188	8-729-216-22	TRANSISTOR 2SA1162-G	
Q189	8-729-216-22	TRANSISTOR 2SA1162-G		Q189	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q190	8-729-216-22	TRANSISTOR 2SA1162-G		Q190	8-729-216-22	TRANSISTOR 2SA1162-G	
Q191	8-729-216-22	TRANSISTOR 2SA1162-G		Q191	8-729-216-22	TRANSISTOR 2SA1162-G	
Q192	8-729-216-22	TRANSISTOR 2SA1162-G		Q192	8-729-216-22	TRANSISTOR 2SA1162-G	
Q193	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q193	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q194	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q194	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q195	8-729-216-22	TRANSISTOR 2SA1162-G		Q195	8-729-216-22	TRANSISTOR 2SA1162-G	
Q196	8-729-920-74	TRANSISTOR 2SC2412K-QR		Q196	8-729-216-22	TRANSISTOR 2SC2412K-QR	
Q197	8-729-216-22	TRANSISTOR 2SA1162-G		Q197	8-729-216-22	TRANSISTOR 2SA1162-G	

**B**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q198	8-729-216-22	TRANSISTOR 2SA1162-G		R141	1-216-063-00	METAL GLAZE	3.9K 5%
Q199	8-729-216-22	TRANSISTOR 2SA1162-G		R142	1-216-073-00	METAL GLAZE	10K 5%
Q200	8-729-901-06	TRANSISTOR DTA144EK		R143	1-216-085-00	METAL GLAZE	33K 5%
Q201	8-729-216-22	TRANSISTOR 2SA1162-G		R145	1-216-065-00	METAL GLAZE	4.7K 5%
Q202	8-729-216-22	TRANSISTOR 2SA1162-G		R146	1-216-037-00	METAL GLAZE	330 5%
Q203	8-729-216-22	TRANSISTOR 2SA1162-G		R147	1-216-089-00	METAL GLAZE	47K 5%
Q204	8-729-216-22	TRANSISTOR 2SA1162-G		R148	1-216-671-11	METAL CHIP	6.8K 0.50%
Q205	8-729-216-22	TRANSISTOR 2SA1162-G		R155	1-216-655-11	METAL CHIP	1.4K 0.50%
Q206	8-729-216-22	TRANSISTOR 2SA1162-G		R157	1-216-679-11	METAL CHIP	15K 0.50%
Q207	8-729-901-01	TRANSISTOR DTC144EK		R158	1-216-677-11	METAL CHIP	12K 0.50%
Q208	8-729-216-22	TRANSISTOR 2SA1162-G		R160	1-216-065-00	METAL GLAZE	4.7K 5%
Q209	8-729-255-12	TRANSISTOR 2SC2551-0		R161	1-216-089-00	METAL GLAZE	47K 5%
Q210	8-729-255-12	TRANSISTOR 2SC2551-0		R163	1-216-073-00	METAL GLAZE	10K 5%
Q211	8-729-255-12	TRANSISTOR 2SC2551-0		R164	1-216-677-11	METAL CHIP	12K 0.50%
Q212	8-729-109-44	TRANSISTOR 2SA94-X4		R165	1-216-107-00	METAL GLAZE	270K 5%
Q299	8-729-920-74	TRANSISTOR 2SC2412K-QR		R166	1-216-681-11	METAL CHIP	18K 0.50%
				R167	1-216-635-11	METAL CHIP	220 0.50%
				R168	1-216-103-00	METAL GLAZE	180K 5%
				R169	1-216-033-00	METAL GLAZE	220 5%
				R170	1-216-089-00	METAL GLAZE	47K 5%
				R171	1-216-053-00	METAL GLAZE	1.5K 5%
				R172	1-216-043-00	METAL GLAZE	560 5%
				R173	1-216-093-00	METAL GLAZE	68K 5%
				R174	1-216-069-00	METAL GLAZE	6.8K 5%
				R175	1-216-057-00	METAL GLAZE	2.2K 5%
JR105	1-216-295-00	METAL GLAZE	0 5%	1/10W			
JR110	1-216-295-00	METAL GLAZE	0 5%	1/10W			
JR118	1-216-295-00	METAL GLAZE	0 5%	1/10W			
JR133	1-216-295-00	METAL GLAZE	0 5%	1/10W			
JR138	1-216-295-00	METAL GLAZE	0 5%	1/10W			
JN178	1-216-295-00	METAL GLAZE	0 5%	1/10W			
K101	1-216-089-00	METAL GLAZE	47K 5%	1/10W			
K102	1-216-025-00	METAL GLAZE	100 5%	1/10W			
K103	1-216-091-00	METAL GLAZE	56K 5%	1/10W			
K104	1-216-061-00	METAL GLAZE	3.3K 5%	1/10W			
K105	1-216-025-00	METAL GLAZE	100 5%	1/10W			
K106	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W			
K107	1-216-025-00	METAL GLAZE	100 5%	1/10W			
K108	1-216-113-00	METAL GLAZE	470K 5%	1/10W			
K109	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W			
K110	1-216-049-00	METAL GLAZE	1K 5%	1/10W			
K111	1-216-063-00	METAL GLAZE	3.9K 5%	1/10W			
K112	1-216-049-00	METAL GLAZE	1K 5%	1/10W			
K113	1-216-401-11	CARBON	47 5%	1/4W F			
K114	1-216-045-00	METAL GLAZE	680 5%	1/10W			
K115	1-216-061-00	METAL GLAZE	3.3K 5%	1/10W			
K117	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
K118	1-216-025-00	METAL GLAZE	100 5%	1/10W			
K119	1-216-647-11	METAL CHIP	680 0.50%	1/10W			
K120	1-216-647-11	METAL CHIP	680 0.50%	1/10W			
K121	1-216-025-00	METAL GLAZE	100 5%	1/10W			
K122	1-216-083-00	METAL GLAZE	27K 5%	1/10W			
K123	1-216-073-00	METAL GLAZE	10K 5%	1/10W			
K124	1-216-073-00	METAL GLAZE	27K 5%	1/10W			
K125	1-216-093-00	METAL GLAZE	100K 5%	1/10W			
K126	1-216-093-00	METAL GLAZE	68K 5%	1/10W			
K127	1-216-037-00	METAL GLAZE	330 5%	1/10W			
K128	1-216-083-00	METAL GLAZE	27K 5%	1/10W			
K129	1-216-067-00	METAL GLAZE	5.6K 5%	1/10W			
K130	1-216-097-00	METAL GLAZE	100K 5%	1/10W			
K131	1-216-089-00	METAL GLAZE	47K 5%	1/10W			
K132	1-216-057-00	METAL GLAZE	2.2K 5%	1/10W			
K133	1-216-079-00	METAL GLAZE	18K 5%	1/10W			
K134	1-216-645-11	METAL CHIP	560 0.50%	1/10W			
K135	1-216-645-11	METAL CHIP	560 0.50%	1/10W			
K136	1-216-091-00	METAL GLAZE	56K 5%	1/10W			
K137	1-216-045-00	METAL GLAZE	680 5%	1/10W			
K138	1-216-657-11	METAL CHIP	1.8K 0.50%	1/10W			
K139	1-216-079-00	METAL GLAZE	18K 5%	1/10W			
K140	1-216-653-11	METAL CHIP	1.2K 0.50%	1/10W			
				R195	1-216-113-00	METAL GLAZE	470K 5%
				R196	1-216-073-00	METAL GLAZE	10K 5%
				R197	1-216-671-11	METAL CHIP	6.8K 0.50%
				R198	1-216-049-00	METAL GLAZE	1K 5%
				R199	1-216-065-00	METAL GLAZE	4.7K 5%
				R200	1-216-065-00	METAL GLAZE	4.7K 5%
				R201	1-216-043-00	METAL GLAZE	560 5%
				R202	1-216-033-00	METAL GLAZE	220 5%
				R203	1-216-045-00	METAL GLAZE	680 5%
				R204	1-216-073-00	METAL GLAZE	10K 5%
				R205	1-216-073-00	METAL GLAZE	10K 5%
				R206	1-216-043-00	METAL GLAZE	560 5%
				R207	1-216-045-00	METAL GLAZE	680 5%
				R208	1-216-671-11	METAL CHIP	6.8K 0.50%
				R209	1-216-043-00	METAL GLAZE	560 5%
				R210	1-216-033-00	METAL GLAZE	220 5%
				R211	1-216-099-00	METAL GLAZE	120K 5%
				R212	1-216-065-00	METAL GLAZE	4.7K 5%
				R213	1-216-043-00	METAL GLAZE	560 5%

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK		
R214	I-216-043-00	METAL GLAZE	560 5%	/10W	R280	I-216-061-00	METAL GLAZE	3.3K 5%	/10W
R215	I-216-125-00	METAL GLAZE	1.5M 5%	/10W	R281	I-216-061-00	METAL GLAZE	3.3K 5%	/10W
R216	I-216-043-00	METAL GLAZE	560 5%	/10W	R282	I-216-037-00	METAL GLAZE	330 5%	/10W
R217	I-216-033-00	METAL GLAZE	220 5%	/10W	R283	I-216-049-00	METAL GLAZE	1K 5%	/10W
R218	I-216-295-00	METAL GLAZE	0 5%	/10W	R284	I-216-057-00	METAL GLAZE	2.2K 5%	/10W
R219	I-216-043-00	METAL GLAZE	560 5%	/10W	R285	I-216-037-00	METAL GLAZE	330 5%	/10W
R220	I-216-043-00	METAL GLAZE	560 5%	/10W	R286	I-216-061-00	METAL GLAZE	3.3K 5%	/10W
R221	I-216-035-00	METAL GLAZE	270 5%	/10W	R287	I-216-061-00	METAL GLAZE	3.3K 5%	/10W
R222	I-216-033-00	METAL GLAZE	220 5%	/10W	R288	I-216-037-00	METAL GLAZE	330 5%	/10W
R223	I-216-073-00	METAL GLAZE	10K 5%	/10W	R289	I-216-049-00	METAL GLAZE	1K 5%	/10W
R224	I-216-073-00	METAL GLAZE	10K 5%	/10W	R290	I-216-057-00	METAL GLAZE	2.2K 5%	/10W
R225	I-216-095-00	METAL GLAZE	82K 5%	/10W	R291	I-216-037-00	METAL GLAZE	330 5%	/10W
R226	I-216-073-00	METAL GLAZE	10K 5%	/10W	R292	I-216-061-00	METAL GLAZE	3.3K 5%	/10W
R227	I-216-035-00	METAL GLAZE	270 5%	/10W	R293	I-216-061-00	METAL GLAZE	3.3K 5%	/10W
R228	I-216-065-00	METAL GLAZE	4.7K 5%	/10W	R295	I-216-057-00	METAL GLAZE	2.2K 5%	/10W
R229	I-216-113-00	METAL GLAZE	470K 5%	/10W	R296	I-216-659-11	METAL CHIP	2.2K 0.50%	/10W
R230	I-216-081-00	METAL GLAZE	22K 5%	/10W	R297	I-216-659-11	METAL CHIP	2.2K 0.50%	/10W
R231	I-216-113-00	METAL GLAZE	470K 5%	/10W	R298	I-216-065-00	METAL GLAZE	4.7K 5%	/10W
R232	I-216-105-00	METAL GLAZE	220K 5%	/10W	R300	I-216-065-00	METAL GLAZE	4.7K 5%	/10W
R233	I-216-073-00	METAL GLAZE	10K 5%	/10W					
R234	I-216-041-00	METAL GLAZE	470 5%	/10W	R301	I-216-065-00	METAL GLAZE	4.7K 5%	/10W
R235	I-216-041-00	METAL GLAZE	470 5%	/10W	R302	I-216-113-00	METAL GLAZE	470K 5%	/10W
R236	I-216-177-00	METAL GLAZE	1.5K 5%	/10W	R303	I-216-065-00	METAL GLAZE	4.7K 5%	/10W
R237	I-216-025-00	METAL GLAZE	100 5%	/10W	R304	I-216-049-00	METAL GLAZE	1K 5%	/10W
R238	I-216-065-00	METAL GLAZE	4.7K 5%	/10W	R305	I-216-049-00	METAL GLAZE	1K 5%	/10W
R239	I-216-065-00	METAL GLAZE	4.7K 5%	/10W	R306	I-216-089-00	METAL GLAZE	47K 5%	/10W
R240	I-216-033-00	METAL GLAZE	220 5%	/10W	R307	I-216-033-00	METAL GLAZE	220 5%	/10W
R241	I-216-073-00	METAL GLAZE	10K 5%	/10W	R308	I-216-089-00	METAL GLAZE	47K 5%	/10W
R242	I-216-051-00	METAL GLAZE	1.2K 5%	/10W	R309	I-216-089-00	METAL GLAZE	47K 5%	/10W
R243	I-216-113-00	METAL GLAZE	470K 5%	/10W	R310	I-216-033-00	METAL GLAZE	220 5%	/10W
R244	I-216-065-00	METAL GLAZE	4.7K 5%	/10W	R311	I-216-089-00	METAL GLAZE	47K 5%	/10W
R245	I-216-679-11	METAL CHIP	15K 0.50%	/10W	R312	I-216-089-00	METAL GLAZE	47K 5%	/10W
R246	I-216-103-00	METAL GLAZE	180K 5%	/10W	R313	I-216-033-00	METAL GLAZE	220 5%	/10W
R247	I-216-093-00	METAL GLAZE	68K 5%	/10W	R314	I-216-089-00	METAL GLAZE	47K 5%	/10W
R248	I-216-095-00	METAL GLAZE	82K 5%	/10W	R315	I-216-113-00	METAL GLAZE	470K 5%	/10W
R249	I-216-109-00	METAL GLAZE	330K 5%	/10W	R316	I-216-105-00	METAL GLAZE	220K 5%	/10W
R250	I-216-101-00	METAL GLAZE	150K 5%	/10W	R317	I-216-109-00	METAL GLAZE	330K 5%	/10W
R251	I-216-105-00	METAL GLAZE	220K 5%	/10W	R318	I-216-105-00	METAL GLAZE	220K 5%	/10W
R252	I-216-101-00	METAL GLAZE	150K 5%	/10W	R319	I-216-099-00	METAL GLAZE	120K 5%	/10W
R253	I-216-101-00	METAL GLAZE	150K 5%	/10W	R320	I-216-099-00	METAL GLAZE	120K 5%	/10W
R254	I-216-033-00	METAL GLAZE	220 5%	/10W	R321	I-216-043-00	METAL GLAZE	560 5%	/10W
R255	I-216-061-00	METAL GLAZE	3.3K 5%	/10W	R322	I-216-109-00	METAL GLAZE	330K 5%	/10W
R256	I-216-107-00	METAL GLAZE	270K 5%	/10W	R323	I-216-109-00	METAL GLAZE	330K 5%	/10W
R258	I-216-041-00	METAL GLAZE	470 5%	/10W	R324	I-216-109-00	METAL GLAZE	330K 5%	/10W
R259	I-216-073-00	METAL GLAZE	10K 5%	/10W	R325	I-216-097-00	METAL GLAZE	100K 5%	/10W
R260	I-216-025-00	METAL GLAZE	100 5%	/10W	R326	I-216-113-00	METAL GLAZE	470K 5%	/10W
R261	I-216-035-00	METAL GLAZE	270 5%	/10W	R328	I-216-073-00	METAL GLAZE	10K 5%	/10W
R262	I-216-097-00	METAL GLAZE	100K 5%	/10W	R329	I-216-107-00	METAL GLAZE	270K 5%	/10W
R263	I-216-029-00	METAL GLAZE	150 5%	/10W	R330	I-216-105-00	METAL GLAZE	220K 5%	/10W
R264	I-216-101-00	METAL GLAZE	4.7K 5%	/10W	R331	I-216-025-00	METAL GLAZE	100 5%	/10W
R265	I-216-067-00	METAL GLAZE	5.6K 5%	/10W	R332	I-216-097-00	METAL GLAZE	100K 5%	/10W
R266	I-216-073-00	METAL GLAZE	10K 5%	/10W	R333	I-216-097-00	METAL GLAZE	100K 5%	/10W
R267	I-216-073-00	METAL GLAZE	10K 5%	/10W	R334	I-216-025-00	METAL GLAZE	100 5%	/10W
R268	I-216-081-00	METAL GLAZE	22K 5%	/10W	R335	I-216-099-00	METAL GLAZE	120K 5%	/10W
R269	I-216-101-00	METAL GLAZE	150K 5%	/10W	R336	I-216-095-00	METAL GLAZE	82K 5%	/10W
R270	I-216-081-00	METAL GLAZE	22K 5%	/10W	R337	I-216-105-00	METAL GLAZE	220K 5%	/10W
R271	I-216-025-00	METAL GLAZE	100 5%	/10W	R338	I-216-025-00	METAL GLAZE	100 5%	/10W
R272	I-216-101-00	METAL GLAZE	150K 5%	/10W	R339	I-216-099-00	METAL GLAZE	120K 5%	/10W
R273	I-216-113-00	METAL GLAZE	470K 5%	/10W	R340	I-216-095-00	METAL GLAZE	82K 5%	/10W
R275	I-216-081-00	METAL GLAZE	22K 5%	/10W	R341	I-216-105-00	METAL GLAZE	220K 5%	/10W
R276	I-216-037-00	METAL GLAZE	330 5%	/10W	R342	I-216-047-00	METAL GLAZE	820 5%	/10W
R277	I-216-049-00	METAL GLAZE	1K 5%	/10W	R343	I-216-053-00	METAL GLAZE	1.5K 5%	/10W
R278	I-216-057-00	METAL GLAZE	2.2K 5%	/10W					
R279	I-216-037-00	METAL GLAZE	330 5%	/10W					

B P FA

REF.NO. PART NO. DESCRIPTION

REF.NO. PART NO. DESCRIPTION

REMARK

Les composants identifiés par une flèche et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

## &lt;MODULE&gt;

SEP101 I-808-654-11 MODULE

## &lt;CRYSTAL&gt;

 X101 I-527-722-00 OSCILLATOR, CRYSTAL  
 X102 I-577-259-11 VIBRATOR, CRYSTAL

## &lt;NEON LAMP&gt;

NL801 I-519-108-XX LAMP, NEON

\*A-1195-048-A P BOARD, COMPLETE

## &lt;CAPACITOR&gt;

 C801 I-126-104-11 ELECT 470MF 20% 35V  
 C802 I-162-318-11 CERAMIC 0.001MF 10% 500V  
 C803 I-102-228-00 CERAMIC 470PF 10% 500V  
 C804 I-123-935-00 ELECT 33MF 20% 160V  
 C805 I-101-004-00 CERAMIC 0.01MF 50V

NL801 I-519-108-XX LAMP, NEON

## &lt;TRANSISTOR&gt;

 Q801 8-729-195-82 TRANSISTOR 2SC2958-L  
 Q802 8-729-201-62 TRANSISTOR 2SC2555-2  
 #4-363-404-00 HOLDER, IC: Q802  
 4-382-854-01 SCREW (M3X8), P, SW (+): Q802  
 4-879-937-00 SHEET, MICA: Q802

Q803 8-729-906-24 TRANSISTOR 2SD835

## &lt;RESISTOR&gt;

 C806 I-124-480-11 ELECT 470MF 20% 25V  
 C807 I-102-228-00 CERAMIC 470PF 10% 500V  
 C808 I-106-367-00 MYLAR 0.01MF 10% 100V  
 C809 I-106-375-12 MYLAR 0.022MF 10% 100V  
 C810 I-162-318-11 CERAMIC 0.001MF 10% 500V

Q801 1-249-383-11 CARBON 1.5 5% 1/4W F

Q802 1-249-377-11 CARBON 0.47 5% 1/4W F

Q803 1-216-049-00 METAL GLAZE 1K 5% 1/10W

Q804 1-249-419-11 CARBON 1.5K 5% 1/4W F

Q805 1-215-892-11 METAL OXIDE 1K 5% 2W F

Q807 1-216-425-11 METAL OXIDE 56 5% 1W F

Q808 1-202-881-91 SOLID 470K 20% 1/2W

Q809 1-216-089-00 METAL GLAZE 47K 5% 1/10W

Q810 1-249-421-11 CARBON 2.2K 5% 1/4W F

Q811 1-216-049-00 METAL GLAZE 1K 5% 1/10W

Q812 1-249-439-11 CARBON 68X 5% 1/4W F

Q813 1-249-414-11 CARBON 560 2% 1/4W F

Q814 1-249-377-11 CARBON 0.47 5% 1/4W F

## &lt;VARIABLE RESISTOR&gt;

RV801 I-223-102-00 RES, ADJ, WIREWOULD 120

## &lt;CONNECTOR&gt;

 CN801 #1-564-595-11 PLUG, CONNECTOR 14P  
 CN802 #1-508-766-00 PIN, CONNECTOR (5MM PITCH) 4P  
 CN803 #1-564-508-11 PLUG, CONNECTOR 5P  
 CN805 #1-560-123-00 PLUG, CONNECTOR (2.5MM) 3P

## &lt;TRANSFORMER&gt;

T801 I-437-082-31 IOT

T802 #1-439-526-11 TRANSFORMER ASSY, FLYBACK

## &lt;DIODE&gt;

 D801 8-719-300-33 DIODE RU-3AM  
 D802 8-719-300-33 DIODE RU-3AM  
 D803 8-719-300-33 DIODE RU-3AM  
 D804 8-719-979-85 DIODE EGP-20G  
 D805 8-719-300-33 DIODE RU-3AM

#1-641-723-11 FA BOARD

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\*4-341-751-01 EYELET EY6.EY7

\*4-341-752-01 EYELET EY1,EY3,EY8,EY9

## &lt;CONNECTOR&gt;

 D806 8-719-300-33 DIODE RU-3AM  
 D807 8-719-105-99 DIODE RD6.2M-B1  
 D808 8-719-008-28 THYRISTOR CRD.2M-8  
 D809 8-719-911-55 DIODE U05G  
 D810 8-719-911-55 DIODE U05G

CN601 #1-580-689-11 PIN, CONNECTOR (PC BOARD) 4P

CN602 #1-508-765-00 PIN, CONNECTOR (5MM PITCH) 3P

CN603 #1-564-507-11 PLUG, CONNECTOR 4P

## &lt;FUSE&gt;

 D811 8-719-911-55 DIODE U05G  
 D813 8-719-300-33 DIODE RU-3AM
F601 #1-532-745-11 FUSE, GLASS TUBE (3.15A/125V)  
I-533-223-11 CLIP, FUSE: F601

## &lt;COIL&gt;

 L802 1-459-442-00 COIL (WITH CORE)  
 L803 1-422-613-11 COIL, AIR CORE  
 L804 1-459-109-00 COIL, DUST CORE  
 L805 #1-560-225-11 COIL, HORIZONTAL LINEARITY  
 L806 I-407-500-00 INDUCTOR 4.7KHN

## &lt;RESISTOR&gt;

R602 I-202-721-00 SOLID 1.5K 10% 1/2W

## &lt;SWITCH&gt;

L807 I-407-500-00 INDUCTOR 4.7KHN

**FA** **QA**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
S601	1-692-049-11	SWITCH, PUSH (AC POWER) (1KEY)		C453	1-124-234-00	ELECT	22MF 20% 16V				
				C454	1-128-499-61	ELECT	220NF 20% 16V				
				C460	1-126-301-11	ELECT	1MF 20% 50V				
A-1275-099-A	QA BOARD, COMPLETE			C461	1-126-301-11	ELECT	1MF 20% 50V				
	*****			C462	1-126-301-11	ELECT	1MF 20% 50V				
I-537-408-11	TERMINAL BOARD, INPUT/OUTPUT (LINE B)			C464	1-163-031-11	CERAMIC CHIP 0.01MF	50V				
I-537-410-11	TERMINAL BOARD, INPUT/OUTPUT (LINE A)			C465	1-163-031-11	CERAMIC CHIP 0.01MF	50V				
*4-341-752-01	EYELET EY10, EY11			C466	1-163-031-11	CERAMIC CHIP 0.01MF	50V				
				C467	1-163-031-11	CERAMIC CHIP 0.01MF	50V				
<CAPACITOR>											
C401	1-124-234-00	ELECT	22MF 20% 16V	CN401	1-506-494-11	PIN, CONNECTOR 15P					
C402	1-124-234-00	ELECT	22MF 20% 16V	CN402	*1-564-518-11	PLUG, CONNECTOR 3P					
C403	1-124-234-00	ELECT	22MF 20% 16V	CN403	*1-580-690-11	PIN, CONNECTOR (PC BOARD) 4P					
C404	1-124-234-00	ELECT	22MF 20% 16V	CN404	*1-564-519-11	PLUG, CONNECTOR 4P					
C405	1-124-234-00	ELECT	22MF 20% 16V								
C406	1-124-234-00	ELECT	22MF 20% 16V	<CONNECTOR>							
C407	1-124-234-00	ELECT	22MF 20% 16V	CN401	1-506-494-11	PIN, CONNECTOR 15P					
C408	1-124-463-00	ELECT	0.1MF 20% 50V	CN402	*1-564-518-11	PLUG, CONNECTOR 3P					
C409	1-124-234-00	ELECT	22MF 20% 16V	CN403	*1-580-690-11	PIN, CONNECTOR (PC BOARD) 4P					
C410	1-124-234-00	ELECT	22MF 20% 16V	CN404	*1-564-519-11	PLUG, CONNECTOR 4P					
C406	1-124-234-00	ELECT	22MF 20% 16V								
C407	1-124-234-00	ELECT	22MF 20% 16V	<DIODE>							
C408	1-124-463-00	ELECT	0.1MF 20% 50V	D401	8-719-404-46	DIODE MA110					
C409	1-124-234-00	ELECT	22MF 20% 16V	D402	8-719-404-46	DIODE MA110					
C410	1-124-234-00	ELECT	22MF 20% 16V	D403	8-719-110-09	DIODE RD8.2ES-B3					
C411	1-124-234-00	ELECT	22MF 20% 16V	D404	8-719-404-46	DIODE MA110					
C412	1-124-234-00	ELECT	22MF 20% 16V	D405	8-719-404-46	DIODE MA110					
C413	1-124-234-00	ELECT	22MF 20% 16V	D406	8-719-404-46	DIODE MA110					
C414	1-126-157-11	ELECT	10MF 20% 16V	D407	8-719-404-46	DIODE MA110					
C415	1-126-157-11	ELECT	10MF 20% 16V	D408	8-719-404-46	DIODE MA110					
C416	1-126-157-11	ELECT	10MF 20% 16V	D409	8-719-404-46	DIODE MA110					
C417	1-126-157-11	ELECT	10MF 20% 16V	D410	8-719-404-46	DIODE MA110					
C418	1-126-157-11	ELECT	10MF 20% 16V	D411	8-719-404-46	DIODE MA110					
C419	1-126-157-11	ELECT	10MF 20% 16V	D412	8-719-404-46	DIODE MA110					
C420	1-126-157-11	ELECT	10MF 20% 16V	D413	8-719-404-46	DIODE MA110					
C421	1-102-125-00	CERAMIC	0.0047MF 10% 50V	D414	8-719-404-46	DIODE MA110					
C422	1-124-464-11	ELECT	0.22MF 20% 50V	D415	8-719-404-46	DIODE MA110					
C423	1-126-157-11	ELECT	10MF 20% 16V	D416	8-719-404-46	DIODE MA110					
C424	1-126-157-11	ELECT	10MF 20% 16V	D417	8-719-404-46	DIODE MA110					
C425	1-108-634-11	MYLAR	0.047MF 10% 100V	D418	8-719-404-46	DIODE MA110					
C426	1-128-499-61	ELECT	220MF 20% 16V	D419	8-719-404-46	DIODE MA110					
C427	1-128-499-61	ELECT	220MF 20% 16V	D420	8-719-404-46	DIODE MA110					
C428	1-124-589-11	ELECT	47MF 20% 16V	D421	8-719-404-46	DIODE MA110					
C429	1-124-234-00	ELECT	22MF 20% 16V	D422	8-719-404-46	DIODE MA110					
C430	1-163-033-00	CERAMIC CHIP 0.022MF	20% 50V	D423	8-719-404-46	DIODE MA110					
C431	1-124-234-00	ELECT	22MF 20% 16V	D424	8-719-404-46	DIODE MA110					
C432	1-163-033-00	CERAMIC CHIP 0.022MF	50V	D425	8-719-404-46	DIODE MA110					
C433	1-124-234-00	ELECT	22MF 20% 16V	D426	8-719-404-46	DIODE MA110					
C434	1-163-033-00	CERAMIC CHIP 0.022MF	50V	D427	8-719-404-46	DIODE MA110					
C435	1-124-234-00	ELECT	22MF 20% 16V	D428	8-719-404-46	DIODE MA110					
C436	1-163-033-00	CERAMIC CHIP 0.022MF	50V	D429	8-719-404-46	DIODE MA110					
C437	1-163-033-00	CERAMIC CHIP 0.022MF	50V	D430	8-719-404-46	DIODE MA110					
C438	1-124-234-00	ELECT	22MF 20% 16V	D431	8-719-404-46	DIODE MA110					
C439	1-163-033-00	CERAMIC CHIP 0.022MF	50V								
C440	1-163-033-00	CERAMIC CHIP 0.022MF	50V								
C441	1-124-234-00	ELECT	22MF 20% 16V	<IC>							
C442	1-163-033-00	CERAMIC CHIP 0.022MF	50V	C401	8-759-501-21	IC NM1149XF					
C443	1-163-033-00	CERAMIC CHIP 0.022MF	50V	C402	8-759-501-21	IC NM1149XF					
C444	1-163-033-00	CERAMIC CHIP 0.01MF	50V	C403	8-759-420-04	IC AN5265					
C445	1-163-031-11	CERAMIC CHIP 0.01MF	50V								
C446	1-124-234-00	ELECT	22MF 20% 16V	<COIL>							
C447	1-126-301-11	ELECT	1MF 20% 50V								
C448	1-124-234-00	ELECT	22MF 20% 16V								
C449	1-163-031-11	CERAMIC CHIP 0.01MF	50V	L401	1-410-682-31	INDUCTOR 470UH					
C450	1-124-234-00	ELECT	22MF 20% 16V	L402	1-410-682-31	INDUCTOR 470UH					
C451	1-163-033-00	CERAMIC CHIP 0.022MF	20% 50V								
C452	1-128-499-61	ELECT	220MF 20% 16V								

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<TRANSISTOR>							
Q401	8-729-920-74	TRANSISTOR 2SC2412K-QR		R438	I-216-091-00	METAL GLAZE 56K 5%	1/10W
Q402	8-729-920-74	TRANSISTOR 2SC2412K-QR		R439	I-216-063-00	METAL GLAZE 3.9K 5%	1/10W
Q403	8-729-920-74	TRANSISTOR 2SA1162-G		R440	I-216-027-00	METAL GLAZE 120 5%	1/10W
Q404	8-729-920-74	TRANSISTOR 2SC2412K-QR		R441	I-216-089-00	METAL GLAZE 47K 5%	1/10W
Q405	8-729-920-74	TRANSISTOR 2SC2412K-QR		R442	I-216-049-00	METAL GLAZE 1K 5%	1/10W
Q406	8-729-920-74	TRANSISTOR 2SC2412K-QR		R443	I-216-748-11	METAL GLAZE 39K 5%	1/10W
Q407	8-729-920-74	TRANSISTOR 2SC2412K-QR		R444	I-214-702-00	METAL GLAZE 75 5%	1/4W
Q408	8-729-920-74	TRANSISTOR 2SC2412K-QR		R445	I-216-049-00	METAL GLAZE 1K 5%	1/10W
Q409	8-729-920-74	TRANSISTOR 2SC2412K-QR		R446	I-216-093-00	METAL GLAZE 68K 5%	1/10W
Q410	8-729-920-74	TRANSISTOR 2SC2412K-QR		R447	I-216-091-00	METAL GLAZE 56K 5%	1/10W
Q411	8-729-920-74	TRANSISTOR 2SA1162-G		R448	I-216-063-00	METAL GLAZE 3.9K 5%	1/10W
Q412	8-729-920-74	TRANSISTOR 2SA1162-G		R449	I-216-027-00	METAL GLAZE 120 5%	1/10W
Q413	8-729-920-74	TRANSISTOR 2SA1162-G		R450	I-214-702-00	METAL GLAZE 75 1X	1/4W
Q414	8-729-920-74	TRANSISTOR 2SA1162-G		R451	I-216-049-00	METAL GLAZE 1K 5%	1/10W
Q416	8-729-145-18	TRANSISTOR 2SC3736		R452	I-216-091-00	METAL GLAZE 56K 5%	1/10W
Q417	8-729-901-06	TRANSISTOR DT1A44EK		R453	I-216-093-00	METAL GLAZE 68K 5%	1/10W
Q418	8-729-901-06	TRANSISTOR DT1A44EK		R454	I-216-063-00	METAL GLAZE 3.9K 5%	1/10W
Q419	8-729-901-06	TRANSISTOR DT1A44EK		R455	I-216-037-00	METAL GLAZE 330 5%	1/10W
Q420	8-729-901-06	TRANSISTOR DTC144EK		R456	I-216-085-00	METAL GLAZE 33K 5%	1/10W
Q421	8-729-901-06	TRANSISTOR DTC144EK		R457	I-216-085-00	METAL GLAZE 33K 5%	1/10W
Q422	8-729-901-01	TRANSISTOR DTC144EK		R458	I-247-707-11	CARBON 390 5%	1/4W
Q423	8-729-901-01	TRANSISTOR DTC144EK		R459	I-216-748-11	METAL GLAZE 39K 5%	1/10W
Q424	8-729-901-01	TRANSISTOR DTC144EK		R460	I-216-089-00	METAL GLAZE 47K 5%	1/10W
<RESISTOR>							
R401	I-214-037-00	METAL GLAZE 75 1X	1/4W	R461	I-216-097-00	METAL GLAZE 100K 5%	1/10W
R402	I-216-049-00	METAL GLAZE 1K 5%	1/10W	R462	I-216-115-00	METAL GLAZE 560 5%	1/10W
R403	I-216-093-00	METAL GLAZE 68K 5%	1/10W	R463	I-216-105-00	METAL GLAZE 220K 5%	1/10W
R404	I-216-091-00	METAL GLAZE 56K 5%	1/10W	R464	I-216-077-00	METAL GLAZE 15K 5%	1/10W
R405	I-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R465	I-216-025-00	METAL GLAZE 100 5%	1/10W
R406	I-216-037-00	METAL GLAZE 330 5%	1/10W	R466	I-216-097-00	METAL GLAZE 100K 5%	1/10W
R407	I-216-078-11	METAL GLAZE 39K 5%	1/10W	R467	I-216-115-00	METAL GLAZE 560K 5%	1/10W
R408	I-216-085-06	METAL GLAZE 33K 5%	1/10W	R468	I-216-095-00	METAL GLAZE 220K 5%	1/10W
R409	I-216-070-00	METAL GLAZE 75 1X	1/4W	R469	I-216-077-00	METAL GLAZE 15K 5%	1/10W
R410	I-216-049-00	METAL GLAZE 1K 5%	1/10W	R470	I-216-025-00	METAL GLAZE 100 5%	1/10W
R411	I-216-093-00	METAL GLAZE 68K 5%	1/10W	R471	I-216-097-00	METAL GLAZE 100K 5%	1/10W
R412	I-216-091-00	METAL GLAZE 56K 5%	1/10W	R472	I-216-115-00	METAL GLAZE 560K 5%	1/10W
R413	I-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R473	I-216-105-00	METAL GLAZE 220K 5%	1/10W
R414	I-216-037-00	METAL GLAZE 330 5%	1/10W	R474	I-216-077-00	METAL GLAZE 15K 5%	1/10W
R415	I-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R475	I-216-025-00	METAL GLAZE 100 5%	1/10W
R416	I-216-023-00	METAL GLAZE 82 5%	1/10W	R476	I-216-080-00	METAL GLAZE 22K 5%	1/10W
R417	I-216-049-00	METAL GLAZE 1K 5%	1/10W	R477	I-216-081-00	METAL GLAZE 22K 5%	1/10W
R418	I-216-093-00	METAL GLAZE 68K 5%	1/10W	R478	I-216-085-00	METAL GLAZE 33K 5%	1/10W
R419	I-216-091-00	METAL GLAZE 56K 5%	1/10W	R479	I-247-711-11	CARBON 680 5%	1/4W
R420	I-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R480	I-247-720-11	CARBON 3.9K 5%	1/4W
R421	I-216-027-00	METAL GLAZE 120 5%	1/10W	R481	I-247-720-11	CARBON 4.7 5%	1/4W
R422	I-214-702-00	METAL GLAZE 75 1X	1/4W	R482	I-249-455-11	CARBON 82K 5%	1/4W
R423	I-214-702-00	METAL GLAZE 75 1X	1/4W	R483	I-249-389-11	CARBON 4.7 5%	1/4W
R424	I-216-049-00	METAL GLAZE 1K 5%	1/10W	R484	I-216-041-00	METAL GLAZE 470 5%	1/10W
R425	I-216-093-00	METAL GLAZE 68K 5%	1/10W	R485	I-247-688-11	CARBON 10 5%	1/4W
R426	I-216-091-00	METAL GLAZE 56K 5%	1/10W	R486	I-216-037-00	METAL GLAZE 330 5%	1/10W
R427	I-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R487	I-249-468-11	CARBON 82K 5%	1/4W
R428	I-216-037-00	METAL GLAZE 330 5%	1/10W	R488	I-249-468-11	CARBON 82K 5%	1/4W
R429	I-214-702-00	METAL GLAZE 75 1X	1/4W	R489	I-249-468-11	CARBON 82K 5%	1/4W
R430	I-216-049-00	METAL GLAZE 1K 5%	1/10W	R490	I-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R431	I-216-093-00	METAL GLAZE 68K 5%	1/10W	R491	I-216-089-00	METAL GLAZE 47K 5%	1/10W
R432	I-216-091-00	METAL GLAZE 56K 5%	1/10W	R492	I-216-089-00	METAL GLAZE 47K 5%	1/10W
R433	I-216-063-00	METAL GLAZE 3.9K 5%	1/10W	R493	I-216-089-00	METAL GLAZE 47K 5%	1/10W
R434	I-216-027-00	METAL GLAZE 120 5%	1/10W	R494	I-216-089-00	METAL GLAZE 47K 5%	1/10W
R435	I-214-702-00	METAL GLAZE 75 1X	1/4W	R495	I-216-295-00	METAL GLAZE 0 5%	1/10W
R436	I-216-049-00	METAL GLAZE 1K 5%	1/10W	R496	I-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R437	I-216-093-00	METAL GLAZE 68K 5%	1/10W	R497	I-216-089-00	METAL GLAZE 47K 5%	1/10W
R438	I-216-093-00	METAL GLAZE 68K 5%	1/10W	R498	I-216-089-00	METAL GLAZE 47K 5%	1/10W
R439	I-216-089-00	METAL GLAZE 47K 5%	1/10W	R499	I-216-089-00	METAL GLAZE 47K 5%	1/10W
R440	I-216-093-00	METAL GLAZE 0 5%	1/10W	R500	I-216-295-00	METAL GLAZE 0 5%	1/10W
R441	I-216-049-00	METAL GLAZE 100K 5%	1/10W	R501	I-216-097-00	METAL GLAZE 100K 5%	1/10W

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
	<VARIABLE RESISTOR>			C512	I-106-375-12	MYLAR	0.022MF	
				C513	I-106-375-12	MYLAR	0.022MF	
				C514	I-106-371-00	MYLAR	0.015MF	
RV401	1-230-481-11	RES, VAR, CARBON 20K		C515	I-124-925-11	ELECT	2.2MF	
*****	*****	*****	*****	C516	I-124-925-11	ELECT	2.2MF	
*1-641-720-11	CA BOARD	*****	*****	C517	I-130-480-00	FILM	0.0056MF	
		*****	*****	C518	I-163-245-11	CERAMIC CHIP	56PF	
		*****	*****	C519	I-124-927-11	ELECT	4.7MF	
		*****	*****	C520	I-163-129-00	CERAMIC CHIP	330PF	
1-526-958-41	SOCKET, CRT	*****	*****	C521	I-124-907-11	ELECT	10NF	
		*****	*****	C523	I-106-363-00	MYLAR	0.0068MF	
		*****	*****	C524	I-102-116-00	CERAMIC	680PF	
C701	I-162-114-00	CERAMIC	0.0047MF	10%	C525	I-102-820-00	CERAMIC	330PF
C702	I-102-050-00	CERAMIC	0.01NF	99%	C526	I-102-973-00	CERAMIC	100PF
C710	I-161-830-00	CERAMIC	0.0047MF	99%	C527	I-124-122-11	ELECT	100MF
				C528	I-102-125-00	CERAMIC	0.0047MF	
				C529	I-124-910-11	ELECT	47MF	
				C530	I-163-097-00	CERAMIC CHIP	15PF	
				C531	I-131-370-00	TANTALUM	6.8MF	
CN701	*1-564-509-11	PLUG, CONNECTOR 6P		C532	I-124-557-11	ELECT	1000MF	
CN702	*1-508-754-00	PIN, CONNECTOR (5MM PITCH) 1P		C533	I-124-927-11	ELECT	4.7MF	
CN703	*1-564-508-11	PLUG, CONNECTOR 5P		C534	I-124-768-11	ELECT	4.7MF	
				C535	I-136-161-00	FILM	0.047MF	
				C536	I-124-927-11	ELECT	4.7MF	
				C537	I-124-484-11	ELECT	220MF	
L701	1-410-668-11	INDUCTOR	27UH	C538	I-124-910-11	ELECT	47MF	
				C539	I-136-113-00	FILM	2MF	
				C540	I-163-017-00	CERAMIC CHIP	0.0047MF	
				C541	I-163-035-00	CERAMIC CHIP	0.047MF	
R701	I-202-871-91	SOLID	2.2K	20%	1/2W			
R702	I-202-871-91	SOLID	2.2K	20%	1/2W			
R703	I-202-871-91	SOLID	2.2K	20%	1/2W			
R704	I-202-877-91	SOLID	100K	20%	1/2W			
R705	I-202-885-91	SOLID	1M	20%	1/2W			
R706	I-202-878-91	SOLID	220K	20%	1/2W			
				C542	I-126-103-11	ELECT	470MF	
				C545	I-126-101-11	ELECT	100MF	
				C546	I-124-907-11	ELECT	10MF	
				C547	I-124-907-11	ELECT	10MF	
				C548	I-124-907-11	ELECT	10MF	
				C549	I-124-907-11	ELECT	10MF	
				C550	I-124-907-11	ELECT	10MF	
				C551	I-124-927-11	ELECT	4.7MF	
				C552	I-101-004-00	CERAMIC	0.01MF	
				C553	I-126-103-11	ELECT	470MF	
				C563	I-106-383-00	MYLAR	0.047MF	
				C564	I-162-318-11	CERAMIC	0.001MF	
				C567	I-124-907-11	ELECT	10MF	
				C568	I-130-736-11	FILM	0.01MF	
				C569	I-130-471-00	FILM	0.001MF	
				C570	I-163-117-00	CERAMIC CHIP	100PF	
				C571	I-124-913-11	ELECT	470MF	
				C572	I-101-004-00	CERAMIC	0.01MF	
				C574	I-106-350-00	MYLAR	0.0022MF	
				C575	I-106-351-00	MYLAR	0.0022MF	
				C831	I-124-907-11	ELECT	10MF	
				C832	I-124-907-11	ELECT	10MF	
				C833	I-163-009-11	CERAMIC CHIP	0.001MF	
				C834	I-163-121-00	CERAMIC CHIP	150PF	
				C835	I-163-209-00	CERAMIC CHIP	0.0015MF	
C501	I-124-477-11	ELECT	47MF	20%	16V			
C502	I-124-907-11	ELECT	10MF	20%	50V			
C503	I-126-103-11	ELECT	470MF	20%	16V			
C504	I-124-902-00	ELECT	0.47MF	20%	50V			
C505	I-106-381-12	MYLAR	0.039MF	10%	100V			
C506	I-124-903-11	ELECT	1MF	20%	50V			
C507	I-106-367-00	MYLAR	0.01MF	10%	100V			
C508	I-124-903-11	ELECT	1MF	20%	50V			
C509	I-136-173-00	FILM	0.47MF	5%	50V			
C510	I-136-161-00	FILM	0.047MF	5%	50V			
C511	I-124-903-11	ELECT	1MF	20%	50V			
				C840	I-163-209-00	CERAMIC CHIP	0.0015MF	
				C841	I-163-209-00	CERAMIC CHIP	0.0015MF	
				C843	I-124-902-00	ELECT	0.47MF	
				C844	I-124-902-00	ELECT	0.47MF	
				C845	I-124-477-11	ELECT	47MF	
				C846	I-124-907-11	ELECT	10MF	
				C847	I-126-233-11	ELECT	22MF	

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REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
C648	I-131-351-00	TANTALUM	4.7MF 10%	35V	D1612	8-719-404-46	DIODE MA110				
C649	I-164-182-11	CERAMIC CHIP	0.0033MF 10%	50V	D1613	8-719-404-46	DIODE MA110				
C1601	I-124-907-11	ELECT	10MF 20%	50V	D1614	8-719-404-46	DIODE MA110				
C1602	I-164-161-11	CERAMIC CHIP	0.0022MF 10%	50V	D1615	8-719-404-46	DIODE MA110				
C1603	I-124-903-11	ELECT	1MF 20%	50V	D1616	8-719-404-46	DIODE MA110				
C1604	I-128-500-51	ELECT	1000MF 20%	50V	D1617	8-719-977-49	DIODE DTZ15B				
C1605	I-124-922-11	ELECT	1000MF 20%	50V	D1618	8-719-977-49	DIODE DTZ15B				
C1606	I-102-074-00	CERAMIC	0.001MF 10%	50V	D1621	8-719-510-12	DIODE D10SC4M				
C1607	I-124-907-11	ELECT	10MF 20%	50V	D1625	8-719-404-46	DIODE MA110				
C1608	I-126-235-11	ELECT	22MF 20%	50V	D1626	8-719-404-46	DIODE MA110				
C1609	I-163-009-11	CERAMIC CHIP	0.001MF 10%	50V	D1627	8-719-404-46	DIODE MA110				
C1610	I-124-927-11	ELECT	4.7MF 20%	50V	D1628	8-719-404-46	DIODE MA110				
C1611	I-126-235-11	ELECT	22MF 20%	50V	D1635	8-719-404-46	DIODE MA110				
C1612	I-130-025-91	FILM	0.0039MF 5%	50V	D1699	8-719-404-46	DIODE MA110				
C1613	I-163-009-11	CERAMIC CHIP	0.001MF 10%	50V			<FUSE>				
C1614	I-164-232-11	CERAMIC CHIP	0.01MF 10%	50V							
C1615	I-124-465-00	ELCT	0.47MF 20%	50V							
C1620	I-163-133-00	CERAMIC CHIP	470PF 5%	50V							
C1621	I-163-117-00	CERAMIC CHIP	100PF 5%	50V							
<b>&lt;CONNECTOR&gt;</b>											
CN501	*I-564-506-11	PLUG, CONNECTOR 3P		I1C501	8-759-909-70	IC CX23025					
CN502	I-500-477-11	PIN, CONNECTOR 12P		I1C502	8-759-100-60	IC UPC1377C					
CN504	*I-564-507-11	PLUG, CONNECTOR 4P		I1C503	8-759-801-98	IC LA7830					
CN505	*I-564-509-11	PLUG, CONNECTOR 6P		I1C504	8-759-929-62	IC NC7812CT					
CN507	*I-564-511-11	PLUG, CONNECTOR 8P		I1C505	8-759-009-51	IC MC14538BF					
CN508	*I-564-104-00	PIN, CONNECTOR (B3P-VH) 3P		I1C831	8-759-509-29	IC XRU4011BF					
CN509	*I-564-506-11	PLUG, CONNECTOR 3P		I1C832	8-759-509-37	IC XRU4070BF					
<b>&lt;DIODE&gt;</b>											
D501	8-719-404-46	DIODE MA110		I1C833	8-759-009-51	IC MC14538BF					
D502	8-719-404-46	DIODE MA110		I1C1601	8-759-509-91	IC XRA10393F					
D503	8-719-404-46	DIODE MA110		<b>&lt;COIL&gt;</b>							
D504	8-719-404-46	DIODE MA110		L1501	1-410-093-11	INDUCTOR 33MH					
D505	8-719-404-46	DIODE MA110		L1502	1-410-665-31	INDUCTOR 15UH					
D506	8-719-404-46	DIODE MA110		L1503	1-424-625-11	COIL, CHOKE (PMC) 381.4UH					
D507	8-719-404-46	DIODE MA110		L1506	1-412-530-31	INDUCTOR 27UH					
D508	8-719-404-46	DIODE MA110		L1601	1-459-155-00	COIL (WITH CORE) 47UH					
D509	8-719-404-46	DIODE MA110		L1602	1-424-626-12	COIL, CHOKE 39UH					
D510	8-719-404-46	DIODE MA110		L1603	1-410-397-21	FERRITE BEAD INDUCTOR					
<b>&lt;TRANSISTOR&gt;</b>											
D511	8-719-404-46	DIODE MA110		O501	8-729-901-01	TRANSISTOR DTC144EK					
D512	8-719-404-46	DIODE MA110		O502	8-729-901-01	TRANSISTOR DTC144EK					
D514	8-719-404-46	DIODE MA110		O503	8-729-901-06	TRANSISTOR DTA144EK					
D831	8-719-404-46	DIODE MA110		O504	8-729-901-01	TRANSISTOR DTC144EK					
D832	8-719-404-46	DIODE MA110		O505	8-729-920-74	TRANSISTOR 2SC2412-QR					
D833	8-719-404-46	DIODE MA110		O506	8-729-901-01	TRANSISTOR DTC144EK					
D834	8-719-404-46	DIODE MA110		O507	8-729-901-01	TRANSISTOR DTC144EK					
D835	8-719-109-89	DIODE RD5.6ES-82		O508	8-729-920-74	TRANSISTOR 2SC2412K-0R					
D836	8-719-977-59	DIODE DTZ248		O509	8-729-920-74	TRANSISTOR 2SC2412K-0R					
D837	8-719-404-46	DIODE MA110		O510	8-729-901-06	TRANSISTOR DTA144EK					
D838	8-719-404-46	DIODE MA110		<b>&lt;TRANSISTOR&gt;</b>							
D1601	8-719-105-XX	DIODE RD6.2W-81		Q511	8-729-901-01	TRANSISTOR DTC144EK					
D1602	8-719-404-46	DIODE MA110		Q512	8-729-920-74	TRANSISTOR 2SC2412K-0R					
D1603	8-719-977-51	DIODE DTZ20B		Q513	8-729-216-22	TRANSISTOR 2SA1162-G					
D1604	8-719-404-46	DIODE MA110		Q514	8-729-216-22	TRANSISTOR 2SA1162-G					
D1605	8-719-404-46	DIODE MA110		Q515	8-729-313-42	TRANSISTOR 2SD1134-C					
D1606	8-719-981-00	DIODE ERC81-004		<b>&lt;TRANSISTOR&gt;</b>							
D1607	8-719-981-00	DIODE ERC81-004		Q516	8-729-901-01	TRANSISTOR DTC144EK					
D1608	8-719-977-02	DIODE DTZ5.6A		Q517	8-729-901-01	TRANSISTOR DTC144EK					
D1609	8-719-977-49	DIODE DTZ15B		Q518	8-729-920-74	TRANSISTOR 2SC2412K-0R					
D1610	8-719-404-46	DIODE MA110		Q519	8-729-920-74	TRANSISTOR 2SC2412K-0R					
D1611	8-729-101-31	TRANSISTOR N13T1		Q525	8-729-920-74	TRANSISTOR 2SC2412K-0R					

Les composants identifiés par une  
trame et une marque **Δ** sont  
critiques pour la sécurité.  
Ne les remplacer que par une pièce  
portant le numéro spécifié.

The components identified by  
shading and mark **Δ** are critical  
for safety.  
Replace only with part number  
specified.

D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
Q532	8-729-920-74	TRANSISTOR 2SC2412K-QR		R535	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
Q533	8-729-920-74	TRANSISTOR 2SC2412K-QR		R536	1-212-881-11	FUSIBLE	100 5% 1/4W F
Q533	8-729-216-22	TRANSISTOR 2SA1162-C		R537	1-215-867-00	METAL OXIDE	470 5% 1W F
Q534	8-729-920-74	TRANSISTOR 2SC2412K-QR		R538	1-216-095-00	METAL GLAZE	82K 5% 1/10W
Q535	8-729-920-74	TRANSISTOR 2SC2412K-QR		R539	1-216-095-00	METAL GLAZE	82K 5% 1/10W
Q836	8-729-309-08	TRANSISTOR 2SC1890A		R540	1-216-101-00	METAL GLAZE	150K 5% 1/10W
U1601	8-729-920-74	TRANSISTOR 2SC2412K-QR		R541	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
U1602	8-729-920-74	TRANSISTOR 2SC2412K-QR		R542	1-216-075-00	METAL GLAZE	12K 5% 1/10W
U1603	8-729-920-74	TRANSISTOR 2SC2412K-QR		R543	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
U1604	8-729-216-22	TRANSISTOR 2SA1162-G		R544	1-216-101-00	METAL GLAZE	150K 5% 1/10W
U1605	8-729-119-80	TRANSISTOR 2SC2658-LK		R545	1-216-041-00	METAL GLAZE	470 5% 1/10W
U1606	8-729-133-42	TRANSISTOR 2SC2341-L		R546	1-216-091-00	METAL GLAZE	56K 5% 1/10W
U1607	8-729-920-74	TRANSISTOR 2SC2412K-QR		R547	1-216-121-00	METAL GLAZE	1M 5% 1/10W
U1608	8-729-920-74	TRANSISTOR 2SC2412K-QR		R548	1-216-107-00	METAL GLAZE	270K 5% 1/10W
U1609	8-729-920-74	TRANSISTOR 2SC2412K-QR		R549	1-216-101-00	METAL GLAZE	150K 5% 1/10W
Q1610	8-729-920-74	TRANSISTOR 2SC2412K-QB		R550	1-216-356-00	METAL OXIDE	3.9 5% 1W F
Q1611	8-729-920-74	TRANSISTOR 2SC2412K-QB		R552	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
Q1612	8-729-920-74	TRANSISTOR 2SC2412K-QB		R553	1-216-748-11	METAL GLAZE	39K 5% 1/10W
Q1613	8-729-920-74	TRANSISTOR 2SC2412K-QR		R554	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q1614	8-729-920-74	TRANSISTOR 2SC2412K-QR		R555	1-216-077-00	METAL GLAZE	15K 5% 1/10W
Q1615	8-729-216-22	TRANSISTOR 2SA1162-G		R557	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
Q1616	8-729-216-22	TRANSISTOR 2SA1162-G		R558	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q1617	8-729-216-22	TRANSISTOR 2SA1162-G		R559	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
Q1618	8-729-216-22	TRANSISTOR 2SA1162-G		R560	1-216-037-00	METAL GLAZE	330 5% 1/10W
<RESISTOR>							
D1619	1-216-295-00	METAL GLAZE 0 5% 1/10W		R561	1-216-081-00	METAL GLAZE	22K 5% 1/10W
D1620	1-216-295-00	METAL GLAZE 0 5% 1/10W		R562	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
J8510	1-216-295-00	METAL GLAZE 0 5% 1/10W		R563	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
A501	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R564	1-219-415-11	CARBON	680 5% 1/4W F
R502	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R565	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
K503	1-249-437-11	CARBON	47K 5% 1/4W F	R566	1-216-025-00	METAL GLAZE	100 5% 1/10W
K504	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R567	1-216-095-00	METAL GLAZE	82K 5% 1/10W
K505	1-249-393-11	CARBON	10 5% 1/4W F	R568	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R506	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W		R569	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R507	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W		R570	1-216-093-00	METAL GLAZE	68K 5% 1/10W
K508	1-216-085-00	METAL GLAZE 33K 5% 1/10W		R571	1-216-089-00	METAL GLAZE	47K 5% 1/10W
K509	1-216-637-11	METAL CHIP 33K 0.50% 1/10W		R572	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R510	1-216-683-11	METAL CHIP 22K 0.50% 1/10W		R573	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
K511	1-216-675-11	METAL CHIP 10K 0.50% 1/10W		R574	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
K512	1-218-761-11	METAL CHIP 240K 0.50% 1/10W		R575	1-216-105-00	METAL GLAZE	220K 5% 1/10W
K513	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W		R576	1-216-109-00	METAL GLAZE	330K 5% 1/10W
K514	1-216-099-00	METAL CHIP 120K 0.50% 1/10W		R577	1-216-105-00	METAL GLAZE	220K 5% 1/10W
K515	1-216-081-00	METAL GLAZE 22K 0.5% 1/10W		R578	1-249-457-11	CARBON	6.8 5% 1/4W F
K516	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R579	1-249-457-11	CARBON	6.8 5% 1/4W F
K517	1-216-107-00	METAL CHIP 270K 0.50% 1/10W		R580	1-216-033-00	METAL GLAZE	220 5% 1/10W
R518	1-249-422-11	CARBON	2.7K 5% 1/4W F	R581	1-216-049-00	METAL GLAZE	1K 5% 1/10W
K519	1-216-085-00	METAL GLAZE 33K 5% 1/10W		R582	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R520	1-216-677-11	METAL CHIP 120K 0.50% 1/10W		R583	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
K521	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W		R584	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R522	1-216-107-00	METAL GLAZE 270K 5% 1/10W		R585	1-216-049-00	METAL GLAZE	22K 5% 1/10W
K523	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R586	1-216-049-00	METAL GLAZE	1K 5% 1/10W
K524	1-216-049-00	METAL GLAZE 1K 5% 1/10W		R587	1-216-075-00	METAL GLAZE	12K 5% 1/10W
K525	1-216-434-11	METAL OXIDE 1.8K 5% 1W F		R588	1-216-049-00	METAL GLAZE	1K 5% 1/10W
K526	1-216-079-00	METAL GLAZE 18K 5% 1/10W		R589	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
K527	1-249-437-11	CARBON	47K 5% 1/4W F	R590	1-216-097-00	METAL GLAZE	100K 5% 1/10W
K528	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R591	1-216-069-11	METAL CHIP	5.6K 0.50% 1/10W
K529	1-216-073-00	METAL GLAZE 10K 5% 1/10W		R592	1-216-675-11	METAL CHIP	10K 0.50% 1/10W
K530	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R593	1-216-105-00	METAL GLAZE	220K 5% 1/10W
K531	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R594	1-216-099-00	METAL CHIP	120K 0.50% 1/10W
K532	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R595	1-216-085-00	METAL GLAZE	33K 5% 1/10W
K533	1-216-089-00	METAL GLAZE 47K 5% 1/10W		R596	1-216-099-00	METAL CHIP	68K 5% 1/10W
K534	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R597	1-216-675-11	METAL CHIP	82K 0.50% 1/10W

The components identified by **X** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.  
Should replacement be required, replace only with the values originally used.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce équivalente.

The components identified by shading and mark **▲** are critical for safety.  
Replace only with part number specified.

REF. NO. PART NO. DESCRIPTION

REMARK | REF.NO. PART NO. DESCRIPTION

#### **REMARK**

R856	1-210-699-11	METAL CHIP	100K	0.50%	1/10W
R857	1-210-686-11	METAL CHIP	30K	0.50%	1/10W
R858	1-210-061-00	METAL GLAZE	3. 3K	5%	1/10W
R859	1-210-436-00	METAL OXIDE	3. 9K	5%	1W
R860	1-210-675-11	METAL CHIP	10K	0.50%	1/10W

R1648	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R1649	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R1650	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R1651	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W

R861	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R862	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R863	1-249-435-11	CARBON	33K	5%	1/4W F
R1503	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1504	1-216-605-11	METAL CHIP	60K	0.50%	1/10W

R1652	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R1653	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R1654	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R1655	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1656	1-216-643-11	METAL CHIP	470	0.50%	1/10W

R1505	1-216-089-00	METAL	GLAZE	47K	5%	1/10W
R1506	1-216-667-11	METAL	CHIP	4.7K	0.50%	1/10W
R1507	1-216-081-00	METAL	GLAZE	22K	5%	1/10W
R1508	1-216-073-00	METAL	GLAZE	10K	5%	1/10W
R1509	1-216-065-00	METAL	GLAZE	4.7K	5%	1/10W

R1657	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1658	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R1659	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1660	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R1661	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W

R1510	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R1511	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1512	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1513	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1519	1-216-031-00	METAL GLAZE	180	5%	1/10W	

#### **Variable selection:**

RV501 1-238-019-11 RES. ADJ. CARBON 47K  
 RV502 1-238-017-11 RES. ADJ. CARBON 22K  
 RV503 1-241-701-11 RES. ADJ. CERMET 4.7K  
 RV504 1-224-250-99 RES. ADJ. METAL GLAZE 2.2K  
 RV505 1-238-009-11 RES. ADJ. CARBON 220

R1602	1-216-681-11	METAL CHIP	18K	0.50%	1/10W
R1603	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R1604	1-249-433-11	CARBON	22K	5%	1/4W F
R1605	1-216-070-00	METAL GLAZE	7.5K	5%	1/10W
R1606	1-216-070-00	METAL GLAZE	7.5K	5%	1/10W

RV506 1-238-012-11 RES. ADJ. CARBON 1K  
 RV507 1-238-013-11 RES. ADJ. CARBON 2.2K  
 RV508 1-238-012-11 RES. ADJ. CARBON 1K  
 RV509 1-238-021-11 RES. ADJ. CARBON 220K  
 RV511 1-238-015-11 RES. ADJ. CARBON 4.7K

R1609	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1609	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R1610	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1611	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1612	1-215-913-11	METAL OXIDE	220	5%	F

RV512	1-238-015-11	RES.	ADJ.	CARBON	4.7K
RV514	1-238-019-11	RES.	ADJ.	CARBON	47K
RV515	1-238-021-11	RES.	ADJ.	CARBON	220K
RV516	1-241-701-11	RES.	ADJ.	CERMET	4.7K
RV831	1-228-997-00	RES.	ADJ.	METAL GLAZE	100K

R1613	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1614	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R1615	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W
R1616	1-216-629-11	METAL CHIP	120	0.50%	1/10W
R1617	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R1618	216-922-00	METAL GLAZE	10K	5%	1/10W

RV832 1-241-702-11 RES. ADJ. CERMET 10K  
RV833A RES. ADJ. CERMET  
RV1601 1-241-700-11 RES. ADJ. CERMET 2.2K  
RV1602 1-238-012-11 RES. ADJ. CARBON 1K  
RV1603A RES. ADJ. CERMET

R1620	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1621	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1622	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1623	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1624	1-216-246-00	METAL GLAZE	100K	5%	1/8W

<RELAY>  
RY1601 1-515-481-21 RELAY (G2R-212P-V)  
<TRANSFORMER>

R1625	1-210-001-00	METAL GLAZE	5.5K	%	1/10W
R1626	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1627	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1628	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1629	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R1630	1-216-682-11	METAL CHIP	22K	0.50%	1/10W

T1601 1-437-216-11 TRANSFORMER, DRIVE  
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\*A-1371-782-A HA BOARD, COMPLETE  
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R1631	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1632	1-216-042-00	METAL GLAZE	510	5%	1/10W
R1633	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R1634	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R1635	1-216-097-00	METAL GLAZE	100K	5%	1/10W

\*4-348-208-00 HOLDER, LED  
\*4-341-752-01 EYELET EY5  
  
<CONNECTOR>

R1636	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1640	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R1641	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1642	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1643	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W

CN001 1-506-478-11 PIN, CONNECTOR 13P  
CN002 1-506-473-11 PIN, CONNECTOR 8P

R1644	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R1645	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1646	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1647	1-216-685-11	METAL CHIP	27K	0.50%	1/10W

D001 8-719-920-05 DIODE SEP281C-30  
D002 8-719-109-68 DIODE RD3.6ESB1

HA X S

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<RESISTOR>							
JW009	1-216-295-00	METAL GLAZE 0 5%	1/10W	C1111	1-163-018-00	CERAMIC CHIP 0.0056MF	10% 50V
JW024	1-216-295-00	METAL GLAZE 0 5%	1/10W	C1112	1-126-160-11	ELECT 1NF	20% 50V
R001	1-247-713-11	CARBON 1K	5%	C1113	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
R002	1-216-295-00	METAL GLAZE 0 5%	1/10W	C1114	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
R003	1-216-295-00	METAL GLAZE 0 5%	1/10W	C1115	1-164-004-11	CERAMIC CHIP 0.1NF	10% 25V
R004	1-216-081-00	METAL GLAZE 22K 5%	1/10W	C1116	1-163-114-00	CERAMIC CHIP 75PF	5% 50V
<VARIABLE RESISTOR>							
RV001	1-211-846-11	RES. VAR. CARBON 20K		C1117	1-124-589-11	ELECT 47MF	20% 16V
RV002	1-211-846-11	RES. VAR. CARBON 20K		C1118	1-164-004-11	CERAMIC CHIP 0.1NF	10% 25V
RV003	1-211-845-11	RES. VAR. CARBON 20K		C1119	1-163-020-00	CERAMIC CHIP 0.0082NF	10% 50V
RV004	1-211-845-11	RES. VAR. CARBON 20K		C1120	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
RV005	1-241-845-11	RES. VAR. CARBON 20K		C1121	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
RV006	1-241-845-11	RES. VAR. CARBON 20K		C1122	1-163-222-11	CERAMIC CHIP 5PF	0.25PF 50V
RV007	1-226-773-11	RES. ADJ. METAL GLAZE 22K		C1123	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
RV008	1-226-773-11	RES. ADJ. METAL GLAZE 22K		C1130	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
RV009	1-226-773-11	RES. ADJ. METAL GLAZE 22K		C1131	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
RV010	1-226-773-11	RES. ADJ. METAL GLAZE 22K					
RV011	1-226-773-11	RES. ADJ. METAL GLAZE 22K					
RV012	1-226-773-11	RES. ADJ. METAL GLAZE 22K					
<CONNECTOR>							
CN1101+1-565-488-11 CONNECTOR, BOARD TO BOARD 12P							
<DIODE>							
D1101	8-719-404-46	DIODE MA110		D1102	8-719-404-46	DIODE MA110	
<IC>							
IC1101 8-752-056-67 IC CXA1214P							
<COIL>							
L1101	1-408-411-00	INDUCTOR	15UH	L1102	1-404-496-00	COIL	
L1103	1-404-496-00	COIL		L1104	1-408-411-00	INDUCTOR	15UH
L1104	1-408-411-00	INDUCTOR	15UH	L1110	1-412-008-31	INDUCTOR CHIP	15UH
L1111	1-412-008-31	INDUCTOR CHIP	15UH				
<CONNECTOR>							
CN21 *1-564-518-11 PLUG, CONNECTOR 3P							
<DIODE>							
D21	8-719-023-78	DIODE SEL3810DLC05		Q1101	8-729-216-22	TRANSISTOR 2SA1162-G	
D22	8-719-023-78	DIODE SEL3810DLC05		Q1102	8-729-920-74	TRANSISTOR 2SC2412X-QR	
D23	8-719-023-78	DIODE SEL3810DLC05		Q1103	8-729-216-22	TRANSISTOR 2SA1162-G	
*****							
*1-641-724-11 X BOARD							
*****							
<TRANSISTOR>							
Q1101 8-729-901-01 TRANSISTOR DTC144EK							
Q1102 8-729-109-44 TRANSISTOR 2SK94-X4							
Q1103 8-729-920-74 TRANSISTOR 2SC2412X-QR							
*****							
A-1394-343-A S BOARD, COMPLETE							
*****							
<CAPACITOR>							
C1101	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	R1101	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
C1102	1-164-004-11	CERAMIC CHIP 0.1NF	10% 25V	R1102	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
C1103	1-124-589-11	ELECT 47MF	20% 16V	R1103	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
C1104	1-163-031-11	CERAMIC CHIP 0.01NF	50V	R1104	1-216-073-00	METAL GLAZE 10K 5%	1/10W
C1105	1-163-114-00	CERAMIC CHIP 75PF	5% 50V	R1105	1-216-031-00	METAL GLAZE 180 5%	1/10W
C1106	1-163-101-00	CERAMIC CHIP 22PF	5% 50V	R1106	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
C1107	1-164-004-11	CERAMIC CHIP 0.1NF	10% 25V	R1107	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
C1108	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	R1108	1-216-039-00	METAL GLAZE 390 5%	1/10W
C1109	1-163-031-11	CERAMIC CHIP 0.01NF	50V	R1109	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
C1110	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	R1110	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
*****							
<RESISTOR>							
R1111 1-216-065-00 METAL GLAZE 4.7K 5%							
R1112 1-216-063-00 METAL GLAZE 3.9K 5%							
R1113 1-216-069-00 METAL GLAZE 6.8K 5%							



The components identified by **S** in this manual have been carefully selected for each set in order to satisfy regulations regarding X-ray radiation.

Should replacement be required, replace only with the value originally used.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark **A** are critical for safety.  
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R1114	I-216-055-00	METAL GLAZE	1.8K 5%	I/10W			
R1115	I-216-061-00	METAL GLAZE	3.3K 5%	I/10W			
R1116	I-216-069-00	METAL GLAZE	6.8K 5%	I/10W			
R1117	I-216-061-00	METAL GLAZE	3.3K 5%	I/10W			
R1118	I-216-073-00	METAL GLAZE	10K 5%	I/10W			
R1119	I-216-049-00	METAL GLAZE	1K 5%	I/10W			
R1120	I-216-097-00	METAL GLAZE	100K 5%	I/10W			
R1121	I-216-121-00	METAL GLAZE	1M 5%	I/10W			
R1122	I-216-039-00	METAL GLAZE	390 5%	I/10W			
R1123	I-216-065-00	METAL GLAZE	4.7K 5%	I/10W			
R1124	I-216-029-00	METAL GLAZE	150 5%	I/10W			
R1125	I-216-029-00	METAL GLAZE	150 5%	I/10W			
R1126	I-216-053-00	METAL GLAZE	1.5K 5%	I/10W			
R1127	I-216-043-00	METAL GLAZE	560 5%	I/10W			
R1128	I-216-049-00	METAL GLAZE	1K 5%	I/10W			
R1129	I-216-091-00	METAL GLAZE	56K 5%	I/10W			
R1130	I-216-295-00	METAL GLAZE	0 5%	I/10W			
R1131	I-216-073-00	METAL GLAZE	10K 5%	I/10W			
R1132	I-216-073-00	METAL GLAZE	10K 5%	I/10W			
R1133	I-216-073-00	METAL GLAZE	10K 5%	I/10W			
R1134	I-216-091-00	METAL GLAZE	56K 5%	I/10W			
<VARIABLE RESISTOR>							
RV1101	I-238-015-11	RES, ADJ, CARBON	4.7K				
RV1102	I-238-013-11	RES, ADJ, CARBON	2.2K				
<TRANSFORMER>							
T1101	I-404-584-11	COIL					
***** G BOARD (SOPSS-1021) *****							
4-812-134-11 RIVET NYLON, 3.5¢							
<CAPACITOR>							
C601	A-1-136-889-11	METALIZED FILM	0.22NF 20%	250V			
C602	A-1-136-889-11	METALIZED FILM	0.22NF 20%	250V			
C603	A-1-161-975-51	CERAMIC	220PF 10%	400V			
C604	A-1-161-973-51	CERAMIC	220PF 10%	400V			
C605	A-1-161-973-51	CERAMIC	220PF 10%	400V			
C606	A-1-161-742-51	CERAMIC	0.0022NF	20%	400V		
C609	A-1-161-742-51	CERAMIC	0.0022NF	20%	400V		
C610	A-1-125-724-11	ELECT	180MF	20%	400V		
C611	A-1-136-206-21	METALIZED FILM	0.033NF 10%	630V			
C612	A-1-124-910-51	ELECT	47MF	20%	50V		
C613	A-1-137-190-91	METALIZED FILM	0.22NF	51	50V		
C614	A-1-137-190-91	METALIZED FILM	0.22NF	51	50V		
C615	A-1-130-471-91	PE TEREPHTHALATE	0.001NF	51	50V		
C651	A-1-161-925-11	CERAMIC	100PF 10%	500V			
C652	A-1-128-486-51	ELECT	178MF	20%	50V		
C653	A-1-128-485-51	ELECT	220MF	20%	50V		
C654	A-1-130-483-91	PE TEREPHTHALATE	0.01NF	51	50V		
<CONNECTOR>							
CNG10	#1-560-436-11	HORIZONTAL PIN ASSY	3P				
CNG51	#1-564-518-11	PLUG, CONNECTOR	3P				
<DIODE>							
D201	A-8-719-971-08	DIODE	ESAC39M	06C			
D601	A-8-719-510-27	DIODE	B3SB60				
D602	A-8-719-921-20	DIODE	ISS119TD				
D603	A-8-719-981-47	DIODE	ERA38-06TP1				
D604	A-8-719-981-47	DIODE	ERA38-06TP1				
D605	A-8-719-113-44	DIODE	RD20ES-T1B3				
D651	A-8-719-971-08	DIODE	ESAC39M	06C			
<IC>							
J601	A-1-809-086-12	IC	CH-101S				
J605	A-8-759-908-15	IC	TL431CLP				
PH601	A-8-759-045-81	IC	TL732GR-LF2				
<COIL>							
L601	A-1-424-616-11	TRANSFORMER	LINE FILTER				
L602	A-1-424-574-11	COIL	F, T				
L603	A-1-424-255-41	COIL	CHOKE (MOLDE)	10UH			
L602	A-1-424-615-11	COIL	CHOKE				
<TRANSISTOR>							
Q601	A-8-729-322-18	TRANSISTOR	2SK1402A				
<RESISTOR>							
R601	A-1-205-940-51	CEMENT	1.5	5%	5W	F	100K
R602	A-1-205-940-51	CEMENT	1.5	5%	5W	F	100K
R603	A-1-215-904-11	METAL OXIDE	100K	5%	2W	F	200K
R604	A-1-215-904-11	METAL OXIDE	100K	5%	2W	F	200K
R605	A-1-212-865-61	FUSIBLE	22.5	5%	1/4W	F	300K
R606	A-1-247-805-91	CARBON	82	5%	1/4W		
R607	A-1-260-128-91	CARBON	270K	5%	1/2W		
R608	A-1-260-128-91	CARBON	270K	5%	1/2W		
R609	A-1-215-904-51	METAL OXIDE	100K	5%	2W	F	200K
R610	A-1-207-455-11	WIRE	0.22	10%	1/2W		
R611	A-1-247-789-91	CARBON	18	5%	1/4W		
R612	A-1-247-795-91	CARBON	33	5%	1/4W		
R613	A-1-215-904-51	METAL OXIDE	100K	5%	2W	F	200K
R614	A-1-247-815-91	CARBON	220	5%	1/4W		
R651	A-1-215-886-51	METAL OXIDE	100	5%	2W	F	
R652	A-1-215-886-51	METAL OXIDE	100	5%	2W	F	
R653	A-1-260-107-91	CARBON	4.7K	5%	1/2W		
R654	A-1-260-107-91	CARBON	4.7K	5%	1/2W		
R655	A-1-247-867-91	CARBON	33K	5%	1/4W		
R656	A-1-247-867-91	CARBON	33K	5%	1/4W		
R657	A-1-247-837-91	CARBON	1.8K	5%	1/4W		
<VARIABLE RESISTOR>							
RV651	A-1-237-443-11	RES, ADJ, CARBON	1K				
<TRANSFORMER>							
T601	A-1-450-760-11	TRANSFORMER	CONVERTER				
*****							
MISCELLANEOUS							
*****							
A-1-413-720-11		SWITCHING REGULATOR	(SOPSS-1021)				
A-1-413-720-31		SWITCHING REGULATOR	(SOPSS-1021)				

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

Les composants identifiés par une trame et une marque  $\Delta$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

REF. NO.	PART NO.	DESCRIPTION	REMARK
$\Delta$	1-426-043-00	COIL, DEGAUSSING	
$\Delta$	1-451-319-22	DEFLECTION Yoke (Y9FXC)	
$\Delta$	1-452-126-11	MAGNET	
$\Delta$	1-532-747-11	FUSE, GLASS TUBE (5A/125V)	
$\Delta$	1-544-252-11	SPEAKER	
	1-555-724-00	WIRE, GROUND	
$\Delta$	1-8-737-151-05	CRT (A20JKU10X)	(PVM-8041Q ONLY)
$\Delta$	1-8-737-651-05	CRT (H20JMP10X)	(PVM-8044Q ONLY)

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#### ACCESSORIES & PACKING MATERIALS

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PART NO.	DESCRIPTION	REMARK
$\Delta$ 1-551-812-11	CORD, POWER (10A/125V)	
1-690-871-11	CABLE (MINI DIN) SP	
2-990-341-02	HOLDER (A), PLUG	
2-990-242-01	HOLDER (B), PLUG	
*3-704-301-01	BAG (STANDARD), PROTECTION	
3-754-506-11	MANUAL, INSTRUCTION	
4-034-835-01	PLATE, TALLY	
*4-034-954-01	INDIVIDUAL CARTON	(PVM-8041Q ONLY)
*4-034-955-01	CUSHION (UPPER) (ASSY)	
*4-034-956-01	CUSHION (LOWER) (ASST)	
*4-035-602-01	INDIVIDUAL CARTON	(PVM-8044Q ONLY)

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B & I Systems Company**

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